

# QMTS2.E109769 - Polymeric Materials - Filament-wound Tubing, Industrial Laminates, Vulcanized Fiber, and Materials for Use in Fabricating Recognized Printed Wiring Boards - Component

## Polymeric Materials - Filament-wound Tubing, Industrial Laminates, Vulcanized Fiber, and Materials for Use in Fabricating Recognized Printed Wiring Boards - Component

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E109769

**Prepregs:**

Mtl Dsg	ANSI Type	Color	Build up		R.T.I.		H				Meets 746E Non-HAL	Meets 746E DSR
			Min Thk (mm)	Flame Class	Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I		
<b>Epoxy Prepreg only furnished as sheets</b>												
<b>S0101 600</b>	No ANSI	NC	0.20	V-0	90	90	-	-	-	-	-	-
			0.38	V-0	90	90	-	-	-	-	-	-
			0.80	V-0	90	90	-	-	-	-	-	-
			1.40	V-0	90	90	-	-	-	0	-	-
<b>Epoxy Blend Prepreg only furnished as sheets</b>												
<b>SP120</b>	No ANSI	NC	0.05	V-0	50	50	-	-	-	-	-	-
			0.20	V-0	50	50	-	-	-	-	-	-
<b>PTFE without reinforcement Prepreg only furnished as sheets</b>												
<b>SG5300NB</b>	No ANSI	NC	0.035	V-0	130	130	0	0	-	-	-	Yes
			0.10	V-0	130	130	0	0	-	-	-	Yes
			0.20	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.80	V-0	130	130	0	0	-	-	-	Yes
			1.60	V-0	130	130	0	0	-	0	-	Yes
<b>Prepreg only furnished as sheets</b>												

<b>SP170G</b>	No ANSI	NC	0.05	V-0	50	50	-	-	-	-	-	-
			0.40	V-0	50	50	-	-	-	-	-	-
			0.80	V-0	50	50	-	-	-	-	-	-
			1.60	V-0	50	50	-	-	-	3	-	-
<b>SP170N</b>	No ANSI	NC	0.05	V-0	50	50	-	-	-	-	-	-
			0.38	V-0	50	50	-	-	-	-	-	-
			0.80	V-0	50	50	-	-	-	-	-	-
			1.60	V-0	50	50	-	-	-	3	-	-
<b>SP180M</b>	No ANSI	NC	0.11	V-0	-	-	-	-	-	-	-	-
			0.15	V-0	-	-	-	-	-	-	-	-
			0.22	V-0	-	-	-	-	-	-	-	-
			0.38	V-0	-	-	-	-	-	-	-	-
			0.75	V-0	-	-	-	-	-	-	-	-
			1.50	V-0	-	-	-	-	-	-	-	-
<b>Prepreg only</b>												
<b>SP225GN (Note 1)</b>												
		NC	0.025	V-0	90	90	-	-	-	-	-	-
			0.10	V-0	90	90	-	-	-	-	-	-
			0.20	V-0	90	90	-	-	-	2	-	-

**High density interconnect - build up materials:**

Mtl Dsg	Core Color	Core		Dielectric		Flame Class	R.T.I.			H				Meets 746E Non-HAL	Meets 746E DSR
		Min Thk	Max Thk	Min Thk	Max Thk		Elec (°C)	Mech (°C)	W	H	V	C			
		(mm)	(mm)	(mic)	(mic)		(°C)	(°C)	I	I	R	I			
<b>FR-4.0 core with Epoxy (EP) dielectric, High density interconnect - build up materials furnished as sheets</b>															
<b>S6015, S6015-1</b>	NC	0.14	-	40	-	V-0	90	-	0	0	-	-	-	-	Yes
		0.14	-	-	100	V-0	120	120	1	0	-	3	-	-	Yes
<b>S6018, S6018-1</b>	NC	0.15	-	40	-	V-0	90	-	3	0	-	-	-	-	Yes
		0.15	-	-	100	V-0	120	120	3	0	-	4	-	-	Yes

**High density interconnect - resin coated foils:**

Mtl Dsg	Core Color	Core		Dielectric		Flame Class	R.T.I.			H				Meets 746E Non-HAL	Meets 746E DSR
		Min Thk	Max Thk	Min Thk	Max Thk		Elec (°C)	Mech (°C)	W	H	V	C			
		(mm)	(mm)	(mic)	(mic)		(°C)	(°C)	I	I	R	I			

**FR-4.0 core with Epoxy (EP) dielectric, High density interconnect - resin coated foils furnished as sheets**

<b>S6101</b>	NC	0.38	-	50	100	V-0	90	-	-	-	-	2	-	-
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**Industrial laminates:**

Mtl Dsg	ANSI Type	Color	Build up		R.T.I.			H				Meets 746E Non-HAL	Meets 746E DSR
			Min Thk (mm)	Flame Class	Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I			
<b>Copolymer Industrial laminates furnished as sheets</b>													
<b>AeroBond 350</b>	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	-	Yes
<b>AeroWave300X</b>	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	-	Yes
<b>LNB33C</b>	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	-	Yes
<b>S</b>	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	-	Yes
<b>S7135D</b>	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	-	Yes
<b>S7135D2</b>	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	-	Yes
<b>S7136D</b>	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	-	Yes

			0.50	V-0	160	130	0	0	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	Yes
<b>Copolymer Industrial laminates furnished as sheets, rods or tubes</b>												
<b>S7136H</b>	No ANSI	NC	0.38	V-0	150	140	0	0	-	-	-	Yes
			0.50	V-0	150	150	0	0	-	-	-	Yes
			0.80	V-0	150	150	0	0	-	-	-	Yes
			1.60	V-0	150	150	0	0	-	0	-	Yes
<b>SU1402</b>	No ANSI	NC	0.38	V-0	170	170	0	0	-	-	-	Yes
			0.50	V-0	170	170	0	0	-	-	-	Yes
			0.80	V-0	170	170	0	0	-	-	-	Yes
			1.60	V-0	180	170	0	0	-	0	-	Yes
<b>Epoxy Industrial laminates furnished as sheets</b>												
<b>Autolad2GH</b>	No ANSI	NC	0.10	V-0	120	120	0	0	-	-	Yes	Yes
			0.20	V-0	120	120	0	0	-	-	-	Yes
			0.43	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	0	-	Yes
<b>BLM1</b>	No ANSI	BK	0.05	V-0	-	-	-	-	-	-	-	-
			0.10	V-0	-	-	-	-	-	-	-	-
			0.20	V-0	-	-	-	-	-	-	-	-
			0.38	V-0	-	-	-	-	-	-	-	-
			0.80	V-0	-	-	-	-	-	-	-	-
			1.60	V-0	-	-	-	-	-	-	-	-
<b>S7735D2</b>	No ANSI	NC	0.10	V-0	155	130	4	0	-	-	-	Yes
			0.20	V-0	160	160	0	0	-	-	-	Yes
			0.38	V-0	160	170	0	0	-	-	-	Yes
			0.63	V-0	160	200	0	0	-	-	-	Yes
			1.60	V-0	160	200	0	0	-	2	-	Yes
<b>ST110G</b>	No ANSI	NC	0.06	V-0	130	140	1	2	-	-	-	Yes
			0.10	V-0	160	150	1	0	-	-	-	Yes
			0.20	V-0	160	160	1	0	-	-	-	Yes
			0.38	V-0	160	160	1	0	-	-	-	Yes

			0.70	V-0	170	160	0	0	-	-	-	Yes
			1.60	V-0	170	160	0	0	-	0	-	Yes
<b>ST115G</b>	No ANSI	NC	0.06	V-0	130	140	1	2	-	-	-	Yes
			0.10	V-0	160	150	1	0	-	-	-	Yes
			0.20	V-0	160	160	1	0	-	-	-	Yes
			0.38	V-0	160	160	1	0	-	-	-	Yes
			0.70	V-0	170	160	0	0	-	-	-	Yes
			1.60	V-0	170	160	0	0	-	0	-	Yes
<b>ST220P</b>	No ANSI	NC	0.50	V-0	90	90	0	1	-	-	-	Yes
			0.63	V-0	90	90	0	1	-	-	-	Yes
			1.40	V-0	90	90	0	1	-	1	-	Yes
<b>Epoxy Industrial laminates furnished as sheets or rolls</b>												
<b>SU1615</b>	No ANSI	NC	0.05	V-0	90	100	5	0	-	-	-	-
			0.10	V-0	95	110	4	0	-	-	-	Yes
			0.20	V-0	110	120	4	0	-	-	-	Yes
			0.38	V-0	125	125	4	0	-	-	-	Yes
			0.63	V-0	140	125	0	0	-	-	-	Yes
			1.40	V-0	150	140	0	0	-	3	-	Yes
<b>Epoxy (EP) Industrial laminates furnished as sheets or rolls</b>												
<b>Autolad5</b>	No ANSI	NC	0.09	V-0	130	130	4	3	-	-	-	Yes
			0.20	V-0	130	130	2	2	-	-	-	Yes
			0.38	V-0	140	140	0	1	-	-	-	Yes
			0.75	V-0	150	150	0	1	-	-	-	Yes
			1.50	V-0	150	150	0	1	-	2	-	Yes
<b>Epoxy (EP) Industrial laminates furnished as sheets, rods or tubes</b>												
<b>S1135, S7546</b>	No ANSI	NC	0.05	V-0	-	-	-	-	-	-	-	-
			0.20	V-0	95	130	0	2	-	-	-	Yes
			0.38	V-0	105	130	0	1	-	-	-	Yes
			0.70	V-0	115	130	0	0	-	-	-	Yes
			1.50	V-0	130	140	0	0	-	2	-	Yes
<b>S1155 600</b>	No ANSI	NC	0.63	V-0	90	90	0	2	-	-	-	-
			1.40	V-0	90	90	0	1	-	0	-	Yes
<b>S1155M</b>	No ANSI	NC	0.03	V-0	125	110	0	3	-	-	Yes	Yes

			0.10	V-0	140	130	0	0	-	-	-	Yes
			0.20	V-0	150	140	0	0	-	-	-	Yes
			0.38	V-0	150	140	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S3155G</b>	No ANSI	NC	0.63	V-0	90	90	0	2	-	-	-	Yes
			1.40	V-0	90	90	0	1	-	1	-	Yes
<b>S7242</b>	No ANSI	BN	0.38	V-0	90	90	0	2	-	-	-	-
			0.63	V-0	90	90	-	-	-	-	-	-
			1.40	V-0	90	90	-	-	-	4	-	-
<b>SB170G</b>	No ANSI	NC	0.05	V-0	-	-	-	-	-	-	-	-
			0.20	V-0	95	130	0	2	-	-	-	Yes
			0.38	V-0	105	130	0	1	-	-	-	Yes
			0.70	V-0	115	130	0	0	-	-	-	Yes
			1.50	V-0	130	140	0	0	-	2	-	Yes
<b>Epoxy Resin with filler Al(OH)3 Industrial laminates furnished as sheets</b>												
<b>S2600R</b>	No ANSI	NC	0.63	V-0	90	90	0	2	-	-	-	Yes
			1.40	V-0	90	90	0	1	-	0	-	Yes
<b>Epoxy blend Industrial laminates furnished as sheets</b>												
<b>S5W, SI455W</b>	No ANSI	NC(WT)	0.20	HB	50	50	-	-	-	-	-	-
			0.38	HB	50	50	-	-	-	-	-	-
			0.63	HB	50	50	-	-	-	-	-	-
			1.40	HB	50	50	-	-	-	-	-	-
<b>SE40, S7439, S7439HW, S7439C</b>												
	No ANSI	NC	0.20	V-0	120	130	0	4	-	-	-	-
			0.38	V-0	160	160	0	2	-	-	-	Yes
			0.63	V-0	170	160	0	2	-	-	-	Yes
			1.40	V-0	180	170	0	1	-	3	-	Yes
<b>SI10USR</b>	No ANSI	NC, BK	0.03	V-0	50	50	0	0	-	-	-	Yes
			0.10	V-0	50	50	0	0	-	-	-	Yes
			0.20	V-0	50	50	0	0	-	-	-	Yes
			0.38	V-0	50	50	0	0	-	-	-	Yes
			0.80	V-0	50	50	0	0	-	-	-	Yes

			1.60	V-0	50	50	0	0	-	2	-	Yes
<b>SI13U</b>	No ANSI	NC, BK	0.03	V-0	50	50	0	0	-	-	-	Yes
			0.10	V-0	50	50	0	0	-	-	-	Yes
			0.20	V-0	50	50	0	0	-	-	-	Yes
			0.38	V-0	50	50	0	0	-	-	-	Yes
			0.80	V-0	50	50	0	0	-	-	-	Yes
			1.60	V-0	50	50	0	0	-	2	-	Yes
<b>SI242D</b>	No ANSI	NC	0.04	V-0	110	90	4	4	-	-	-	-
			0.20	V-0	130	105	3	2	-	-	-	Yes
			0.38	V-0	140	115	0	2	-	-	-	Yes
			0.71	V-0	150	155	0	1	-	-	-	Yes
			1.50	V-0	160	155	0	1	-	2	-	Yes
<b>Epoxy blend Industrial laminates furnished as sheets or rolls</b>												
<b>SU1610(h)</b>	No ANSI	NC(WT)	0.10	HB	50	50	-	-	-	-	-	-
<b>Epoxy blend Industrial laminates furnished as sheets, rods or tubes</b>												
<b>SI10U(S)</b>	No ANSI	NC	0.04	V-0	70	85	4	2	-	-	-	Yes
			0.10	V-0	70	90	4	2	-	-	-	Yes
			0.20	V-0	85	90	3	1	-	-	-	Yes
			0.38	V-0	90	90	3	1	-	-	-	Yes
			0.63	V-0	95	90	0	1	-	-	-	Yes
			1.60	V-0	120	105	0	0	-	1	-	Yes
<b>SI246, SI246U</b>	No ANSI	NC	0.04	V-0	70	85	4	2	-	-	-	Yes
			0.10	V-0	70	90	4	2	-	-	-	Yes
			0.20	V-0	85	90	3	1	-	-	-	Yes
			0.38	V-0	90	90	3	1	-	-	-	Yes
			0.63	V-0	95	90	0	1	-	-	-	Yes
			1.60	V-0	120	105	0	0	-	1	-	Yes
<b>SU1304</b>	No ANSI	NC	0.04	V-0	70	85	4	2	-	-	-	Yes
			0.10	V-0	70	90	4	2	-	-	-	Yes
			0.20	V-0	85	90	3	1	-	-	-	Yes
			0.38	V-0	90	90	3	1	-	-	-	Yes
			0.63	V-0	95	90	0	1	-	-	-	Yes
			1.60	V-0	120	105	0	0	-	1	-	Yes

<b>Modified Polyphenylene ether Industrial laminates furnished as sheets</b>												
<b>S78</b>	No ANSI	NC	0.04	V-0	95	80	0	2	-	-	-	Yes
			0.10	V-0	95	90	0	1	-	-	-	Yes
			0.20	V-0	100	105	0	1	-	-	-	Yes
			0.38	V-0	125	115	0	1	-	-	-	Yes
			0.80	V-0	125	115	0	1	-	-	-	Yes
			1.50	V-0	125	115	0	1	-	2	-	Yes
<b>Modified Polyphenylene ether Industrial laminates furnished as sheets, rods or tubes</b>												
<b>mmWave</b>	No ANSI	NC	0.38	V-0	130	115	0	0	-	-	-	Yes
			0.80	V-0	150	130	0	0	-	-	-	Yes
			1.50	V-0	150	130	0	0	-	3	-	Yes
<b>S7338, S7335, Syamic 6, Syamic 6N</b>												
	No ANSI	NC	0.80	V-0	150	130	0	0	-	-	-	Yes
			1.50	V-0	150	130	0	0	-	3	-	Yes
<b>PTFE Industrial laminates furnished as sheets</b>												
<b>SCGA-500 GF233</b>	No ANSI	NC	0.25	V-0	130	130	3	0	-	-	-	Yes
			0.41	V-0	130	130	3	0	-	-	-	Yes
			0.75	V-0	130	130	0	0	-	-	-	Yes
			1.55	V-0	130	130	0	0	-	0	-	Yes
<b>SCGA-500 GF255</b>	No ANSI	NC	0.25	V-0	130	130	0	0	-	0	-	Yes
			0.41	V-0	130	130	0	0	-	0	-	Yes
			0.75	V-0	130	130	0	0	-	0	-	Yes
			1.55	V-0	130	130	0	0	-	0	-	Yes
<b>SCGA-500 GF320</b>	No ANSI	NC	0.25	V-0	130	130	0	0	-	0	-	Yes
			0.41	V-0	130	130	0	0	-	0	-	Yes
			0.75	V-0	130	130	0	0	-	0	-	Yes
			1.55	V-0	130	130	0	0	-	0	-	Yes
<b>SG3300</b>	No ANSI	NC	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.80	V-0	130	130	0	0	-	-	-	Yes
			1.50	V-0	130	130	0	0	-	0	-	Yes
<b>SG3300W2</b>	No ANSI	NC	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.80	V-0	130	130	0	0	-	-	-	Yes
			1.60	V-0	130	130	0	0	-	0	-	Yes



<b>SG7350D</b>	No ANSI	NC	0.127	V-0	130	130	0	0	-	-	-	Yes
			0.25	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.80	V-0	130	130	0	0	-	-	-	Yes
			1.60	V-0	130	130	0	0	-	0	-	Yes
<b>SG7350D2</b>	No ANSI	NC	0.127	V-0	130	130	0	0	-	-	-	Yes
			0.25	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.80	V-0	130	130	0	0	-	-	-	Yes
			1.50	V-0	130	130	0	0	-	0	-	Yes
<b>PTFE Industrial laminates</b>												
<b>SG5300</b>	No ANSI	NC	0.10	V-0	130	130	0	0	-	-	-	Yes
			0.20	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.80	V-0	130	130	0	0	-	-	-	Yes
			1.60	V-0	130	130	0	0	-	0	-	Yes
<b>PTFE without reinforcement Industrial laminates furnished as sheets</b>												
<b>SG7300N, mmWave77</b>												
	No ANSI	NC	0.127	V-0	130	130	4	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	130	0	0	-	-	-	Yes
			1.50	V-0	130	130	0	0	-	0	-	Yes
<b>Polybutadiene/polystyrene copolymer Industrial laminates furnished as sheets, rods or tubes</b>												
<b>S7136</b>	No ANSI	NC	0.16	V-0	50	50	0	2	-	-	-	Yes
			0.50	V-0	50	50	0	2	-	-	-	Yes
			0.80	V-0	50	50	0	2	-	-	-	Yes
			1.60	V-0	50	50	0	2	-	1	-	Yes
<b>Polyimide Industrial laminates furnished as sheets</b>												
<b>SH260, SH260M</b>	No ANSI	NC(WT)	0.08	HB	50	50	-	-	-	-	-	-
			0.20	HB	50	50	-	-	-	-	-	-
			0.38	HB	50	50	-	-	-	-	-	-
			0.63	HB	50	50	-	-	-	-	-	-
			1.40	HB	50	50	-	-	-	-	-	-

<b>Polyimide blend Industrial laminates furnished as sheets</b>												
<b>S1220, S7643</b>	No ANSI	NC	0.04	V-0	90	100	0	4	-	-	-	-
			0.20	V-0	95	110	0	3	-	-	-	Yes
			0.38	V-0	100	110	0	2	-	-	-	Yes
			0.63	V-0	110	110	0	1	-	-	-	Yes
			1.60	V-0	120	125	0	1	-	2	-	Yes
<b>SI64X, SI643, SI643U, SI643HU</b>												
	No ANSI	NC	0.04	V-0	90	100	0	4	-	-	-	-
			0.20	V-0	95	110	0	3	-	-	-	Yes
			0.38	V-0	100	110	0	2	-	-	-	Yes
			0.63	V-0	110	110	0	1	-	-	-	Yes
			1.60	V-0	120	125	0	1	-	2	-	Yes
<b>Polymer Blend Industrial laminates furnished as sheets</b>												
<b>Synamic8N</b>	No ANSI	NC	0.05	V-0	50	50	1	0	-	-	-	Yes
			0.10	V-0	50	50	1	0	-	-	-	Yes
			0.20	V-0	50	50	1	0	-	-	-	Yes
			0.38	V-0	50	50	0	0	-	-	-	Yes
			0.80	V-0	50	50	0	0	-	-	-	Yes
			1.60	V-0	50	50	0	0	-	2	-	Yes
<b>Polyphenylene Oxide Industrial laminates furnished as sheets, rods or tubes</b>												
<b>S7135</b>	No ANSI	NC	0.16	V-0	65	90	2	3	-	-	-	Yes
			0.50	V-0	85	90	2	3	-	-	-	Yes
			0.80	V-0	95	90	0	2	-	-	-	Yes
			1.60	V-0	105	95	0	2	-	0	-	Yes
<b>Industrial laminates furnished as sheets</b>												
<b>AeroWave 300</b>	No ANSI	NC	0.04	V-0	95	80	0	2	-	-	-	Yes
			0.10	V-0	95	90	0	1	-	-	-	Yes
			0.20	V-0	100	105	0	1	-	-	-	Yes
			0.38	V-0	125	115	0	1	-	-	-	Yes
			0.80	V-0	125	115	0	1	-	-	-	Yes
			1.50	V-0	125	115	0	1	-	2	-	Yes
<b>Aerowave350</b>	No ANSI	NC	0.38	V-0	50	50	0	0	-	-	-	Yes
			0.80	V-0	50	50	0	0	-	-	-	Yes

			1.60	V-0	50	50	0	0	-	1	-	Yes
<b>Autolad1G</b>	FR-4.1	NC	0.03	V-0	130	120	4	3	-	-	Yes	Yes
			0.20	V-0	130	130	4	0	-	-	-	Yes
			0.38	V-0	130	130	1	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
<b>Autolad2G</b>	FR-15.1	NC	0.10	V-0	120	120	0	0	-	-	Yes	Yes
			0.20	V-0	120	120	0	0	-	-	-	Yes
			0.43	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	0	-	Yes
<b>mmWave G</b>	No ANSI	NC	0.20	V-0	130	140	2	0	-	-	Yes	Yes
			0.38	V-0	140	150	2	0	-	-	-	Yes
			0.75	V-0	140	160	1	0	-	-	-	Yes
			1.50	V-0	140	170	0	0	-	2	-	Yes
<b>mmWave G(E)</b>	No ANSI	NC	0.20	V-0	130	140	2	0	-	-	Yes	Yes
			0.38	V-0	140	150	2	0	-	-	-	Yes
			0.75	V-0	140	160	1	0	-	-	-	Yes
			1.50	V-0	140	170	0	0	-	2	-	Yes
<b>Q160, PQ160, Q161, Q162</b>												
	FR-4.0	NC	0.20	V-0	120	90	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.4	V-0	130	140	0	0	-	0	-	Yes
<b>Q260, Q260#, PQ260</b>												
	CEM-3.0	NC	1.4	V-0	130	140	0	2	-	0	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
<b>Q310</b>	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.40	V-0	130	140	1	2	4	3	-	Yes
<b>Q360, Q360H, Q360G, Q360W</b>												
	CEM-1	NC	0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	0	-	Yes
<b>S1150GH</b>	FR-4.1	NC	0.03	V-0	130	120	4	3	-	-	Yes	Yes

			0.20	V-0	130	130	4	0	-	-	-	Yes
			0.38	V-0	130	130	1	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
<b>S1155GX</b>	FR-4.1	NC	0.03	V-0	105	130	4	4	-	-	Yes	-
			0.05	V-0	105	130	4	4	-	-	-	-
			0.10	V-0	120	130	4	0	-	-	-	Yes
			0.20	V-0	130	130	2	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
<b>S1165, S1546, S7542K</b>												
	No ANSI	NC	0.05	V-0	-	-	-	-	-	-	Yes	-
			0.20	V-0	130	125	1	2	-	-	-	Yes
			0.38	V-0	140	130	0	2	-	-	-	Yes
			0.80	V-0	150	140	0	2	-	-	-	Yes
			1.60	V-0	150	150	0	2	-	4	-	Yes
<b>S1165G</b>	FR-4.1	NC	0.20	V-0	130	125	1	2	-	-	Yes	Yes
			0.38	V-0	130	130	0	2	-	-	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	4	-	Yes
<b>S1170F</b>	FR-4.0	NC	0.20	V-0	130	130	2	3	-	-	-	Yes
			0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
<b>S1180G</b>	FR-4.1	NC	0.20	V-0	130	125	1	2	-	-	Yes	Yes
			0.38	V-0	130	130	0	2	-	-	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	4	-	Yes
<b>S1210G</b>	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes

			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S1250G</b>	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S168GL</b>	FR-4.1	NC	0.03	V-0	105	130	4	4	-	-	Yes	-
			0.05	V-0	105	130	4	4	-	-	-	-
			0.10	V-0	120	130	4	0	-	-	-	Yes
			0.20	V-0	130	130	2	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
<b>S168GN</b>	FR-15.1	NC	0.025	V-0	105	140	0	4	-	-	Yes	-
			0.10	V-0	125	150	0	0	-	-	-	Yes
			0.20	V-0	150	150	0	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S225G</b>	FR-15.1	NC	0.025	V-0	105	140	0	4	-	-	Yes	-
			0.10	V-0	125	150	0	0	-	-	-	Yes
			0.20	V-0	150	150	0	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S26, S2600F</b>	CEM-3.0	NC	0.63	V-0	130	140	0	1	-	-	-	Yes
			1.60	V-0	130	140	0	0	-	0	-	Yes
<b>S7439GS</b>	FR-15.1	NC	0.05	V-0	140	130	4	2	-	-	Yes	Yes
			0.15	V-0	150	150	4	0	-	-	-	Yes
			0.20	V-0	150	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	3	0	-	-	-	Yes

			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	2	-	Yes
<b>S7641G</b>	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S7645G</b>	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S7735GD2</b>	FR-15.1	NC	0.05	V-0	140	130	4	2	-	-	Yes	Yes
			0.15	V-0	150	150	4	0	-	-	-	Yes
			0.20	V-0	150	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	3	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	2	-	Yes
<b>SDI06K</b>	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>SDI07K</b>	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>SI05NF</b>	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-

			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>SI07N</b>	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>ST110</b>	FR-4.0	NC	0.20	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	1	-	Yes
<b>ST215, ST210G</b>	CEM-3.1	NC	0.50	V-0	130	130	0	2	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.60	V-0	130	140	0	1	-	0	-	Yes
<b>SU1301, S1155K, SL1155K</b>												
	FR-4.1	NC	0.03	V-0	105	130	4	4	-	-	Yes	-
			0.05	V-0	105	130	4	4	-	-	-	-
			0.10	V-0	120	130	4	0	-	-	-	Yes
			0.20	V-0	130	130	2	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
<b>SU1609</b>	No ANSI	NC	0.025	V-0	90	90	5	1	-	-	Yes	-
			0.10	V-0	90	90	4	0	-	-	-	Yes
			0.20	V-0	90	90	4	0	-	-	-	Yes
			0.38	V-0	90	90	1	0	-	-	-	Yes
			0.63	V-0	90	90	0	0	-	-	-	Yes
			1.50	V-0	90	90	0	0	-	3	-	Yes
<b>SU1621</b>	No ANSI	NC	0.03	V-0	90	95	4	2	-	-	-	Yes

			0.05	V-0	90	95	4	1	-	-	-	Yes
			0.20	V-0	90	115	4	0	-	-	-	Yes
			0.38	V-0	90	115	3	0	-	-	-	Yes
			0.80	V-0	90	115	0	0	-	-	-	Yes
			1.60	V-0	100	120	0	0	-	2	-	Yes
<b>SU1804</b>	No ANSI	NC	0.10	V-0	130	140	4	0	-	-	Yes	Yes
			0.20	V-0	150	160	3	0	-	-	-	Yes
			0.38	V-0	155	160	3	0	-	-	-	Yes
			0.63	V-0	170	170	0	0	-	-	-	Yes
			1.40	V-0	170	180	0	0	-	0	-	Yes
<b>SU1903</b>	No ANSI	NC	0.20	V-0	180	170	0	0	-	-	-	Yes
			0.38	V-0	180	180	0	0	-	-	-	Yes
			0.63	V-0	180	180	0	0	-	-	-	Yes
			1.40	V-0	180	180	0	0	-	3	-	Yes
<b>Synamic6GX</b>	FR-15.1	NC	0.05	V-0	140	130	4	2	-	-	Yes	Yes
			0.15	V-0	150	150	4	0	-	-	-	Yes
			0.20	V-0	150	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	3	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	2	-	Yes
<b>Synamic8G</b>	No ANSI	NC	0.20	V-0	130	140	4	0	-	-	Yes	Yes
			0.38	V-0	140	150	1	0	-	-	-	Yes
			0.75	V-0	140	160	0	0	-	-	-	Yes
			1.50	V-0	140	170	0	0	-	3	-	Yes
<b>Synamic8GN</b>	No ANSI	NC	0.20	V-0	130	140	4	0	-	-	Yes	Yes
			0.38	V-0	140	150	1	0	-	-	-	Yes
			0.75	V-0	140	160	0	0	-	-	-	Yes
			1.50	V-0	140	170	0	0	-	3	-	Yes
<b>Synamic8GX</b>	No ANSI	NC	0.20	V-0	130	140	4	0	-	-	Yes	Yes
			0.38	V-0	140	150	1	0	-	-	-	Yes
			0.75	V-0	140	160	0	0	-	-	-	Yes
			1.50	V-0	140	170	0	0	-	3	-	Yes
<b>Synamic9N</b>	No ANSI	NC	0.05	V-0	50	50	0	1	-	-	-	Yes



			0.10	V-0	50	50	0	0	-	-	-	Yes
			0.20	V-0	50	50	0	0	-	-	-	Yes
			0.38	V-0	50	50	0	0	-	-	-	Yes
			0.80	V-0	50	50	0	0	-	-	-	Yes
			1.60	V-0	50	50	0	0	-	2	-	Yes
<b>Industrial laminates furnished as sheets or rolls</b>												
<b>Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G</b>												
	FR-4.0	NC	0.10	V-0	120	90	0	0	-	-	-	Yes
			0.20	V-0	120	90	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
<b>S1135G</b>	No ANSI	NC	0.05	V-0	-	-	-	-	-	-	-	-
			0.20	V-0	125	120	0	0	-	-	-	Yes
			0.38	V-0	130	120	0	0	-	-	-	Yes
			0.63	V-0	130	120	0	0	-	-	-	Yes
			1.40	V-0	130	130	0	0	4	2	-	Yes
<b>S25</b>	No ANSI	NC	0.20	V-0	95	110	-	-	-	-	-	-
			0.38	V-0	100	110	-	-	-	-	-	-
			0.80	V-0	120	110	-	-	-	-	-	-
			1.60	V-0	140	130	-	-	-	-	-	-
<b>S7439G</b>	FR-15.1	NC	0.03	V-0	120	120	0	3	-	-	Yes	Yes
			0.20	V-0	150	140	0	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>SU1611</b>	No ANSI	NC	0.20	V-0	50	50	0	0	-	-	-	Yes
			0.38	V-0	50	50	0	0	-	-	-	Yes
			0.63	V-0	50	50	0	0	-	-	-	Yes
			1.40	V-0	50	50	0	0	-	3	-	Yes
<b>Industrial laminates furnished as sheets, rods or tubes</b>												
<b>Autolad2</b>	FR-4.0	NC	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes

			1.60	V-0	130	140	0	0	-	0	-	Yes
<b>Autolad3G</b>	FR-15.1	NC	0.05	V-0	130	140	0	1	-	-	Yes	Yes
			0.10	V-0	130	140	0	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S1000</b>	FR-4.0	NC	0.38	V-0	130	130	1	0	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.60	V-0	130	140	0	2	4	3	-	Yes
<b>S1000-2, S-2(C)</b>	FR-4.0	NC	0.38	V-0	130	130	1	0	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.60	V-0	130	140	0	2	4	3	-	Yes
<b>S1000-2M, Autolad3</b>												
	FR-4.0	NC	0.10	V-0	-	-	-	-	-	-	-	-
			0.20	V-0	130	130	2	3	-	-	-	Yes
			0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
<b>S1000HS</b>	FR-4.0	NC	0.20	V-0	-	-	-	-	-	-	-	-
			0.38	V-0	130	130	0	3	-	-	-	Yes
			0.80	V-0	130	140	0	1	-	-	-	Yes
			1.60	V-0	130	140	0	0	-	3	-	Yes
<b>S1000M, S1000H, Autolad1</b>												
	FR-4.0	NC	0.05	V-0	90	90	-	-	-	-	-	-
			0.10	V-0	90	90	-	-	-	-	-	-
			0.38	V-0	130	130	0	3	-	-	-	Yes
			0.80	V-0	130	140	0	1	-	-	-	Yes
			1.60	V-0	130	140	0	0	-	3	-	Yes
<b>S1130</b>	FR-4.0	NC	0.18	V-0	130	130	0	0	6	-	-	Yes
			0.33	V-0	130	130	0	0	5	-	-	Yes
			0.63	V-0	130	130	0	0	5	-	-	Yes
			1.40	V-0	130	130	0	0	4	0	-	Yes
<b>S1141, S1141-4, S1141 150, S1141 170, S1151</b>												

	FR-4.0	NC	0.07	V-0	90	90	3	0	-	-	-	Yes
			0.38	V-0	130	130	3	0	0	-	-	Yes
			0.63	V-0	130	140	3	0	0	-	-	Yes
			1.40	V-0	130	140	3	0	0	3	-	Yes
<b>S1141KF</b>	FR-4.0	NC	0.07	V-0	90	90	3	0	-	-	-	Yes
			0.38	V-0	130	130	3	0	0	-	-	Yes
			0.63	V-0	130	140	3	0	0	-	-	Yes
			1.40	V-0	130	140	3	0	0	3	-	Yes
<b>S1145, S1150G, S1125, SI055W</b>												
	FR-4.1	NC	0.05	V-0	110	110	0	3	-	-	Yes	Yes
			0.10	V-0	130	130	0	3	-	-	-	Yes
			0.20	V-0	130	130	0	3	-	-	-	Yes
			0.38	V-0	130	130	0	2	-	-	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	1	-	Yes
<b>S1150</b>	FR-4.0	NC	0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	4	-	Yes
<b>S1150F, S1140F, S1141-4F</b>												
	FR-4.0	NC	0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
<b>S1151G</b>	FR-4.1	NC	1.40	V-0	130	140	0	0	-	0	Yes	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.20	V-0	130	110	0	0	-	-	-	Yes
			0.05	V-0	130	100	4	1	-	-	-	Yes
<b>S1152G</b>	FR-4.1	NC	0.05	V-0	110	110	0	3	-	-	Yes	Yes
			0.10	V-0	130	130	0	3	-	-	-	Yes
			0.20	V-0	130	130	0	3	-	-	-	Yes
			0.38	V-0	130	130	0	2	-	-	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	1	-	Yes

<b>S1155M</b>	FR-4	NC	1.50	V-0	130	140	0	0	-	2	-	Yes
<b>S1170</b>	FR-4.0	NC	0.38	V-0	130	130	-	-	-	-	-	-
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.57	V-0	130	140	0	2	-	3	-	Yes
<b>S1170G, S7045GH</b>	FR-15.1	NC	0.03	V-0	150	125	4	4	-	-	Yes	-
			0.10	V-0	150	140	4	0	-	-	-	Yes
			0.20	V-0	150	150	1	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S1170GP</b>	No ANSI	NC	0.38	V-0	-	-	-	-	-	-	-	-
			0.63	V-0	-	-	-	-	-	-	-	-
			1.40	V-0	-	-	-	-	-	-	-	-
<b>S1170M</b>	FR-4.0	NC	0.06	V-0	90	90	-	-	-	-	-	-
			0.20	V-0	130	140	0	3	-	-	-	Yes
			0.38	V-0	130	140	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
<b>S1190</b>	FR-4.0	NC	0.09	V-0	130	130	0	3	-	-	-	Yes
			0.20	V-0	130	130	0	2	-	-	-	Yes
			0.38	V-0	130	130	0	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	2	-	Yes
<b>S1190G</b>	FR-15.1	NC	0.38	V-0	150	150	0	0	-	-	Yes	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>S1190M</b>	FR-15.0	NC	0.09	V-0	130	130	0	3	-	-	-	Yes
			0.20	V-0	130	130	0	2	-	-	-	Yes
			0.38	V-0	140	140	0	1	-	-	-	Yes
			0.63	V-0	150	150	0	1	-	-	-	Yes
			1.40	V-0	150	150	0	1	-	2	-	Yes
<b>S1440</b>	FR-4.0	NC	0.38	V-0	130	140	0	0	4	-	-	Yes
			0.80	V-0	130	140	0	0	4	-	-	Yes

			1.60	V-0	130	140	0	0	3	1	-	Yes
<b>S1600, S1600M</b>	FR-4.0	NC	0.63	V-0	130	140	0	3	4	-	-	Yes
			1.57	V-0	130	140	0	2	4	0	-	Yes
<b>S1600H</b>	FR-4.0	NC	0.20	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	0	-	Yes
<b>S1600L</b>	FR-4.0	NC	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.60	V-0	130	140	0	0	-	0	-	Yes
<b>S1860</b>	FR-4.0	NC	0.38	V-0	130	130	1	0	-	-	-	-
			0.80	V-0	130	140	1	1	-	-	-	Yes
			1.60	V-0	130	140	1	1	-	4	-	Yes
<b>S2126, S2135, S2155</b>												
	CEM-3.0	NC	0.63	V-0	130	140	3	0	4	-	-	Yes
			1.40	V-0	130	140	1	0	4	0	-	Yes
<b>S2130, S2130JB\$</b>	CEM-3.0	NC	0.63	V-0	130	140	0	2	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes
			0.50	V-0	130	130	0	2	-	-	-	Yes
<b>S2131, S2131JB</b>	CEM-3.0	NC	0.63	V-0	130	140	0	0	4	-	-	Yes
			1.40	V-0	130	140	0	0	4	3	-	Yes
<b>S2136, ST210</b>	CEM-3.0	NC	0.63	V-0	130	140	0	0	4	-	-	Yes
			1.40	V-0	130	140	0	0	4	3	-	Yes
<b>S2155G</b>	CEM-3.1	NC	0.50	V-0	130	130	0	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	0	-	Yes
<b>S2600EF</b>	CEM-3.0	NC	0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
<b>S3110, COB714</b>	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.57	V-0	130	140	1	2	4	-	-	Yes
			3.20	V-0	130	140	-	-	-	2	-	Yes
<b>S3116</b>	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.57	V-0	130	140	1	2	4	0	-	Yes

<b>S3155</b>	No ANSI	NC	0.63	V-0	90	90	-	-	-	-	-	-
			1.60	V-0	90	90	-	-	-	2	-	-
<b>S7035, AeroWave 360</b>												
	FR-4.0	NC	0.20	V-0	120	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
<b>S7036</b>	FR-4.0	NC	0.20	V-0	120	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
<b>S7038, SL7038</b>	FR-4.0	NC	0.20	V-0	120	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
<b>S7038V</b>	FR-4.0	NC	0.20	V-0	120	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
<b>S7040G</b>	FR-4.1	NC	0.03	V-0	90	90	4	4	-	-	Yes	-
			0.20	V-0	120	120	4	0	-	-	-	Yes
			0.38	V-0	130	130	4	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
<b>S7040GX</b>	FR-4.1	NC	0.20	V-0	120	120	4	0	-	-	Yes	Yes
			0.38	V-0	130	130	4	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
<b>S7045G</b>	FR-4.1	NC	0.03	V-0	120	125	4	4	-	-	Yes	-
			0.10	V-0	120	130	4	0	-	-	-	Yes
			0.20	V-0	130	130	1	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes

			1.40	V-0	130	140	0	0	-	3	-	Yes
<b>S7045GX</b>	FR-4.1	NC	0.20	V-0	120	120	4	0	-	-	Yes	Yes
			0.38	V-0	130	130	4	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
<b>S7438</b>	No ANSI	NC	0.10	V-0	-	-	-	-	-	-	-	-
			0.38	V-0	-	-	-	-	-	-	-	-
			0.80	V-0	-	-	-	-	-	-	-	-
			1.60	V-0	-	-	-	-	-	-	-	-
<b>S7542G (Note 1)</b>	No ANSI	NC	0.20	V-0	90	90	-	-	-	-	-	-
<b>SB120</b>	No ANSI	NC (YL)	0.05	V-0	-	-	-	-	-	-	-	-
			0.38	V-0	-	-	-	-	-	-	-	-
			0.63	V-0	-	-	-	-	-	-	-	-
			1.40	V-0	-	-	-	-	-	-	-	-
<b>SCGA-500-GF220</b>	No ANSI	NC	0.25	V-0	-	-	0	0	-	-	-	-
			0.50	V-0	-	-	0	0	-	-	-	-
			0.76	V-0	-	-	0	0	-	-	-	-
			1.50	V-0	-	-	0	0	-	0	-	-
<b>SCGA-500-GF265</b>	No ANSI	NC	0.25	V-0	-	-	0	0	-	-	-	-
			0.50	V-0	-	-	0	0	-	-	-	-
			0.76	V-0	-	-	0	0	-	-	-	-
			1.50	V-0	-	-	0	0	-	0	-	-
<b>SCGA-500-GF300</b>	No ANSI	NC	0.25	V-0	130	130	0	0	-	-	-	-
			0.50	V-0	130	130	0	0	-	-	-	-
			0.76	V-0	130	130	0	0	-	-	-	-
			1.50	V-0	130	130	0	0	-	0	-	-
<b>SE80, SDI03, SDI03K, LSDI03K</b>												
	FR-4.1	NC	0.03	V-0	130	130	0	1	-	-	Yes	Yes
			0.10	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
<b>SML02G, S1543</b>	FR-15.1	NC	0.03	V-0	130	140	0	1	-	-	Yes	Yes

			0.10	V-0	130	140	0	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
<b>ST115, ST115D</b>	FR-4.0	NC	0.20	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	4	1	-	Yes
<b>SU1305</b>	FR-4.1	NC	0.03	V-0	120	110	0	3	-	-	Yes	Yes
			0.10	V-0	130	130	0	0	-	-	-	Yes
			0.20	V-0	130	140	0	0	-	-	-	Yes
			0.38	V-0	130	140	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
<b>SU1501</b>	No ANSI	NC	0.05	V-0	130	130	1	3	-	-	Yes	Yes
			0.10	V-0	160	160	1	0	-	-	-	Yes
			0.38	V-0	170	170	0	0	-	-	-	Yes
			0.63	V-0	180	180	0	0	-	-	-	Yes
			1.40	V-0	180	180	0	0	-	3	-	Yes
<b>SU1504</b>	No ANSI	NC	0.20	V-0	90	90	0	0	-	-	-	Yes
			0.38	V-0	90	90	0	0	-	-	-	Yes
			0.80	V-0	90	90	0	0	-	-	-	Yes
			1.60	V-0	90	90	0	0	-	0	-	Yes
<b>SU1603</b>	No ANSI	NC	0.10	V-0	150	150	3	0	-	-	-	Yes
			0.20	V-0	150	150	0	0	-	-	-	Yes
			0.38	V-0	160	150	0	0	-	-	-	Yes
			0.80	V-0	160	150	0	0	-	-	-	Yes
			1.50	V-0	160	150	0	0	-	2	-	Yes
<b>WLM1</b>	No ANSI	NC	0.04	HB	-	-	-	-	-	-	-	-
			0.10	HB	-	-	-	-	-	-	-	-
			0.38	HB	-	-	-	-	-	-	-	-
			0.63	HB	-	-	-	-	-	-	-	-
			1.40	HB	-	-	-	-	0	-	-	-



**Metal base industrial laminates:**

Mtl Dsg	Metal Color	Metal		Dielectric		Flame Class	R.T.I.		H				Meets 746E Non-HAL	Meets 746E DSR
		Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)		Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I		
<b>Aluminum base with Epoxy (EP) dielectric, industrial laminates furnished as sheets</b>														
<b>SAR20LM, SAR25H, STR20 (k)</b>														
	NC	0.30	-	35	150	V-0	180	170	4	0	-	0	-	Yes
<b>Aluminum base with Epoxy (EP) and Phenolic dielectric, industrial laminates furnished as sheets or rolls</b>														
<b>SA110L</b>	NC	0.30	-	70	200	V-0	-	-	-	-	-	-	-	-
<b>SAR15, SAR20, SAR20H, SAR30, STR15(e)</b>														
	NC	0.30	-	50	150	V-0	130	130	4	0	-	0	-	Yes
<b>Aluminum or Copper base with Epoxy (EP) dielectric, industrial laminates furnished as sheets</b>														
<b>SAR20L, SCR20L, STR20L (j)</b>														
	NC	0.30	-	50	150	V-0	90	90	4	0	-	0	-	Yes
<b>Anodized Aluminum base with Epoxy (EP) blend dielectric, industrial laminates furnished as sheets</b>														
<b>SAR10S, SAR15S, SAR20S, SAR30S</b>														
	NC	0.30	-	50	-	V-0	140	140	4	1	-	-	-	Yes
		0.30	-	-	150	V-0	140	140	4	1	-	0	-	Yes
<b>Anodized Aluminum base with Epoxy (EP) with glass fabric dielectric, industrial laminates furnished as sheets or rolls</b>														
<b>SA115, SA120</b>	NC	0.30	-	70	200	V-0	90	90	0	1	-	1	-	Yes
<b>Copper base with Epoxy (EP) blend dielectric, industrial laminates furnished as sheets</b>														
<b>SCR10S, SCR15S, SCR20S, SCR30S (i)</b>														
	NC	0.45	-	50	-	V-0	140	140	4	1	-	-	-	Yes
		0.45	-	-	150	V-0	140	140	4	1	-	0	-	Yes
<b>Iron base with Epoxy (EP) blend dielectric, industrial laminates furnished as sheets</b>														
<b>SFR10S, SFR15S, SFR20S, SFR30S (i)</b>														
	NC	0.45	-	55	-	V-0	140	140	4	1	-	-	-	Yes
		0.45	-	-	150	V-0	140	140	4	1	-	0	-	Yes

**Ultrathin build ups:**

Mtl Dsg	Build Up				Laminate			Prepreg		
	ANSI Type	Min Thk (mm)	TI Elec	TI Mech	Mtl Dsg	Thk (mic)	TI Elec	Mtl Dsg	Thk (mic)	TI Elec

<b>AeroBond 350</b>	No ANSI	0.16	160	90	AeroBond 350	50	50	AeroBond 350	50	50
		0.50	160	130	AeroBond 350	50	50	AeroBond 350	50	50
		0.76	160	160	AeroBond 350	50	50	AeroBond 350	50	50
		1.52	170	170	AeroBond 350	50	50	AeroBond 350	50	50
<b>Aerowave 300</b>	No ANSI	0.20	100	105	AeroWave 300	40	95	AeroBond 300	40	95
		0.38	125	115	AeroWave 300	40	95	AeroBond 300	40	95
<b>AeroWave300X</b>	No ANSI	0.16	160	90	AeroWave300X	50	50	AeroWave300XB	50	50
		0.50	160	130	AeroWave300X	50	50	AeroWave300XB	50	50
		0.76	160	160	AeroWave300X	50	50	AeroWave300XB	50	50
		1.52	170	170	AeroWave300X	50	50	AeroWave300XB	50	50
<b>Aerowave350/Aerowave350B</b>										
	No ANSI	0.38	50	50	Aerowave350	50	50	Aerowave350B	50	50
<b>Autolad1G</b>	FR-4.1	0.20	130	130	Autolad1G	30	120	Autolad1GB	30	120
		0.63	130	140	Autolad1G	30	120	Autolad1GB	30	120
<b>Autolad2</b>	FR-4.0	0.38	130	130	Autolad2	50	90	Autolad2B	50	90
		0.63	130	140	Autolad2	50	90	Autolad2B	50	90
<b>Autolad2G</b>	FR-15.1	0.20	120	120	Autolad2G	50	90	Autolad2GB	50	90
		0.43	130	130	Autolad2G	50	90	Autolad2GB	50	90
		0.63	150	150	Autolad2G	50	90	Autolad2GB	50	90
<b>Autolad2GH</b>	No ANSI	0.20	120	120	Autolad2GH	50	90	Autolad2GHB	50	90
		0.43	130	130	Autolad2GH	50	90	Autolad2GHB	50	90
		0.63	150	150	Autolad2GH	50	90	Autolad2GHB	50	90
<b>Autolad3G</b>	FR-15.1	0.10	130	140	Autolad3G	30	90	Autolad3GB	30	90
		0.38	150	150	Autolad3G	30	90	Autolad3GB	30	90
		0.63	150	150	Autolad3G	30	90	Autolad3GB	30	90
		1.40	150	150	Autolad3G	30	90	Autolad3GB	30	90
<b>Autolad5</b>	No ANSI	0.20	130	130	Autolad5	30	90	Autolad5B	30	90
		0.38	140	140	Autolad5	30	90	Autolad5B	30	90

		0.75	150	150	Autolad5	30	90	Autolad5B	30	90
<b>BLM1</b>	No ANSI	0.10	-	-	BLM1	50	-	BLM1B	50	-
<b>LNB33C</b>	No ANSI	0.16	160	90	LNB33C	50	50	LNB33CB	50	50
		0.50	160	130	LNB33C	50	50	LNB33CB	50	50
		0.76	160	160	LNB33C	50	50	LNB33CB	50	50
		1.52	170	170	LNB33C	50	50	LNB33CB	50	50
<b>mmWave G</b>	No ANSI	0.20	130	140	mmWave G	50	50	mmWave GB	50	50
		0.38	140	150	mmWave G	50	50	mmWave GB	50	50
		0.75	140	160	mmWave G	50	50	mmWave GB	50	50
		1.50	140	170	mmWave G	50	50	mmWave GB	50	50
<b>mmWave G(E)</b>	No ANSI	0.20	130	140	mmWave G(E)	50	50	mmWave GB(E)	50	50
		0.38	140	150	mmWave G(E)	50	50	mmWave GB(E)	50	50
		0.75	140	160	mmWave G(E)	50	50	mmWave GB(E)	50	50
		1.50	140	170	mmWave G(E)	50	50	mmWave GB(E)	50	50
<b>Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G/Q100CB</b>										
	FR-4.0	0.38	130	130	Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G	50	90	Q100CB	50	90
<b>S</b>	No ANSI	0.16	160	90	S	50	50	SB	50	50
		0.50	160	130	S	50	50	SB	50	50
		0.76	160	160	S	50	50	SB	50	50
		1.52	170	170	S	50	50	SB	50	50
<b>S0101 600</b>	No ANSI	0.40	90	90	-	-	-	S0101 600	200	90
<b>S1000</b>	FR-4.0	0.38	130	130	S1000	50	90	S1000B	50	90
		0.38	130	130	S1000	102	120	S1000B	102	120
<b>S1000-2, S-2(C)</b>	FR-4.0	0.38	130	130	S1000-2, S-2	50	90	S1000-2B, S-2B	50	50
		0.38	130	130	S1000-2, S-2	102	120	S1000-2B, S-2B	102	120
<b>S1000-2M, Autolad3</b>										

	FR-4.0	0.20	130	130	S1000-2M, Autolad3	50	90	S1000-2MB, SP170M, Autolad3B	50	90
		0.38	130	130	S1000-2M, Autolad3	50	90	S1000-2MB, SP170M, Autolad3B	50	90
		0.63	130	140	S1000-2M, Autolad3	50	90	S1000-2MB, SP170M, Autolad3B	50	90
		1.40	130	140	S1000-2M, Autolad3	50	90	S1000-2MB, SP170M, Autolad3B	50	90
<b>S1000HS</b>	FR-4.0	0.20	-	-	S1000HS	50	-	S1000HSB	50	-
		0.38	130	130	S1000HS	50	90	S1000HSB	50	90
		0.63	130	140	S1000HS	50	90	S1000HSB	50	90
<b>S1000M, S1000H, Autolad1</b>										
	FR-4.0	0.10	90	90	S1000M, S1000H, Autolad1	50	90	S1000MB, S1000HB, Autolad1B	50	90
		0.38	130	130	S1000M, S1000H, Autolad1	50	90	S1000MB, S1000HB, Autolad1B	50	90
<b>S1130</b>	FR-4.0	0.38	130	130	S1130	50	90	S0101	50	90
		0.38	130	130	S1130	160	120	S0101	160	120
<b>S1135, S7546</b>	No ANSI	0.20	95	130	S1135, S7546	50	50	S1135B, S7546B	50	50
		0.38	105	130	S1135, S7546	50	50	S1135B, S7546B	50	50
		0.70	115	130	S1135, S7546	50	50	S1135B, S7546B	50	50
		1.50	130	140	S1135, S7546	50	50	S1135B, S7546B	50	50
<b>S1135G</b>	No ANSI	0.20	125	120	S1135G	30	90	S1135GB	30	90
		0.38	130	120	S1135G	30	90	S1135GB	30	90
		0.63	130	120	S1135G	30	90	S1135GB	30	90
		1.40	130	130	S1135G	30	90	S1135GB	30	90
<b>S1141, S1141-4, S1141 150, S1141 170, S1151</b>										
	FR-4.0	0.38	130	130	S1141, S1141-4, S1141 150, S1141 170, S1151	50	90	S0401, S0401-4, S0401 150, S0401 170, S1151B	50	90

		0.38	130	130	S1141, S1141-4, S1141 150, S1141 170, S1151	160	120	S0401, S0401-4, S0401 150, S0401 170, S1151B	160	120
<b>S1141KF</b>	FR-4.0	0.38	130	130	S1141KF	50	90	S0401KF	50	90
		0.38	130	140	S1141KF	160	120	S0401KF	160	120
<b>S1145, S1150G, S1125, SI055W</b>										
	FR-4.1	0.10	130	130	S1145, S1150G, S1125, SI055W	30	90	S1145B, S1150GB, S1125B, SI055WB	30	90
<b>S1150</b>	FR-4.0	0.38	130	130	S1150	50	90	S1150B	50	90
<b>S1150F, S1140F, S1141-4F</b>										
	FR-4.0	0.38	130	130	S1150F, S1140F, S1141-4F	50	90	S1150FB, S1140FB, S0401-4F	50	90
		0.63	130	140	S1150F, S1140F, S1141-4F	50	90	S1150FB, S1140FB, S0401-4F	50	90
		1.40	130	140	S1150F, S1140F, S1141-4F	50	90	S1150FB, S1140FB, S0401-4F	50	90
<b>S1150GH</b>	FR-4.1	0.20	130	130	S1150GH	30	120	S1150GHB	30	120
		0.63	130	140	S1150GH	30	120	S1150GHB	30	120
<b>S1151G</b>	FR-4.1	0.63	130	140	S1151G	50	90	S1151GB	50	90
		0.38	130	130	S1151G	50	90	S1151GB	50	90
		0.20	130	110	S1151G	50	90	S1151GB	50	90
<b>S1152G</b>	FR-4.1	0.10	130	130	S1152G	30	90	S1152GB	30	90
<b>S1155 600</b>	No ANSI	0.63	50	50	S1155 600	200	50	S0155 600	200	50
<b>S1155GX</b>	FR-4.1	0.10	120	130	S1155GX	30	105	S1155GXB	30	105
		0.20	130	130	S1155GX	30	105	S1155GXB	30	105
		0.63	130	140	S1155GX	30	105	S1155GXB	30	105
<b>S1155M</b>	No ANSI	0.10	140	130	S1155M	30	125	S1155MB	30	125
		0.20	150	140	S1155M	30	125	S1155MB	30	125
		0.38	150	140	S1155M	30	125	S1155MB	30	125

		0.63	150	150	S1155M	30	125	S1155MB	30	125
		1.40	150	150	S1155M	0.03	125	S1155MB	30	125
<b>S1165, SI546, S7542K</b>										
	No ANSI	0.20	130	125	S1165, SI546, S7542K	50	50	S0165, SI546B, S7542KB	50	50
		0.38	140	130	S1165, SI546, S7542K	50	50	S0165, SI546B, S7542KB	50	50
		0.80	150	140	S1165, SI546, S7542K	50	50	S0165, SI546B, S7542KB	50	50
		1.60	150	150	S1165, SI546, S7542K	50	50	S0165, SI546B, S7542KB	50	50
<b>S1165G</b>	FR-4.1	0.20	130	125	S1165G	50	50	S1165GB	50	50
		0.38	130	130	S1165G	50	50	S1165GB	50	50
		0.63	130	140	S1165G	50	50	S1165GB	50	50
<b>S1170</b>	FR-4.0	0.38	130	130	S1170	50	90	S0701	50	90
		0.63	130	140	S1170	50	90	S0701	50	90
		1.57	130	140	S1170	50	90	S0701	50	90
<b>S1170F</b>	FR-4.0	0.20	130	130	S1170F	50	90	S1170FB	50	90
		0.38	130	130	S1170F	50	90	S1170FB	50	90
		0.63	130	140	S1170F	50	90	S1170FB	50	90
		1.40	130	140	S1170F	50	90	S1170FB	50	90
<b>S1170G, S7045GH</b>	FR-15.1	0.10	150	140	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
		0.20	150	150	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
		0.38	150	150	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
		0.63	150	150	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
		1.40	150	150	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
<b>S1170GP</b>	No ANSI	0.38	-	-	S1170GP	50	-	S1170GPB	50	-
<b>S1170M</b>	FR-4.0	0.20	130	140	S1170M	50	90	S0701M	50	90
<b>S1180G</b>	FR-4.1	0.20	130	125	S1180G	50	50	S1180GB	50	50

		0.38	130	130	S1180G	50	50	S1180GB	50	50
		0.63	130	140	S1180G	50	50	S1180GB	50	50
<b>S1190</b>	FR-4.0	0.20	130	130	S1190	30	90	S1190B	30	90
		0.38	130	130	S1190	30	90	S1190B	30	90
		0.63	130	140	S1190	30	90	S1190B	30	90
		1.40	130	140	S1190	30	90	S1190B	30	90
<b>S1190G</b>	FR-15.1	0.38	150	150	S1190G	30	90	S1190GB	30	90
		0.63	150	150	S1190G	30	90	S1190GB	30	90
		1.40	150	150	S1190G	30	90	S1190GB	30	90
<b>S1190M</b>	FR-15.0	0.20	130	130	S1190M	30	90	S1190MB	30	90
		0.38	140	140	S1190M	30	90	S1190MB	30	90
		0.63	150	150	S1190M	30	90	S1190MB	30	90
		1.40	150	150	S1190M	30	90	S1190MB	30	90
<b>S1210G</b>	FR-15.1	0.10	130	150	S1210G	25	130	S1210GB	25	130
		0.20	140	150	S1210G	25	130	S1210GB	25	130
		0.38	150	150	S1210G	25	130	S1210GB	25	130
		0.63	150	150	S1210G	25	130	S1210GB	25	130
		1.40	150	150	S1210G	25	130	S1210GB	25	130
<b>S1220, S7643</b>	No ANSI	0.20	95	110	S1220, S7643	40	90	S1220B, S7643B	30	90
		0.38	100	110	S1220, S7643	40	90	S1220B, S7643B	30	90
		0.63	110	110	S1220, S7643	40	90	S1220B, S7643B	30	90
		1.60	120	125	S1220, S7643	40	90	S1220B, S7643B	30	90
<b>S1250G</b>	FR-15.1	0.10	130	150	S1250G	25	130	S1250GB	25	130
		0.20	140	150	S1250G	25	130	S1250GB	25	130
		0.38	150	150	S1250G	25	130	S1250GB	25	130
		0.63	150	150	S1250G	25	130	S1250GB	25	130
		1.40	150	150	S1250G	25	130	S1250GB	25	130
<b>S1440</b>	FR-4.0	0.38	130	130	S1440	50	90	S0440	50	90
		0.38	130	130	S1440	160	120	S0440	160	120

<b>S1600H</b>	FR-4.0	0.20	130	130	S1600H	50	90	S1600HB	50	90
		0.38	130	130	S1600H	50	90	S1600HB	50	90
		0.63	130	140	S1600H	50	90	S1600HB	50	90
		1.40	130	140	S1600H	50	90	S1600HB	50	90
<b>S1600L</b>	FR-4.0	0.38	130	130	S1600L	50	90	S1600LB	50	90
		0.63	130	140	S1600L	50	90	S1600LB	50	90
		1.40	130	140	S1600L	50	90	S1600LB	50	90
<b>S168GL</b>	FR-4.1	0.10	120	130	S168GL	30	105	SP168GL	30	105
		0.20	130	130	S168GL	30	105	SP168GL	30	105
		0.63	130	140	S168GL	30	105	SP168GL	30	105
<b>S168GN/SP168GN</b>	FR-15.1	0.10	125	150	S168GN	25	105	SP168GN	25	105
		0.20	150	150	S168GN	25	105	SP168GN	25	105
<b>S1860</b>	FR-4.0	0.38	130	130	S1860	50	90	S1860B	50	90
<b>S2130, S2130JB</b>	CEM-3.0	0.63	130	140	S2130, S2130JB\$	50	90	S0102	50	90
		0.63	130	140	S2130, S2130JB\$	50	90	S0103	90	90
		0.63	130	140	S2130, S2130JB\$	50	90	S0104	160	120
<b>S225G/SP225G</b>	FR-15.1	0.10	125	150	S225G	25	105	SP225G	25	105
		0.20	150	150	S225G	25	105	SP225G	25	105
<b>S25</b>	No ANSI	0.20	95	110	S25	50	50	S25B	50	50
		0.38	100	110	S25	50	50	S25B	50	50
		0.80	120	110	S25	50	50	S25B	50	50
		1.60	140	130	S25	50	50	S25B	50	50
<b>S7035, AeroWave 360</b>										
	FR-4.0	0.20	120	130	S7035, AeroWave 360	50	90	S7035B, AeroBond 360	50	90
		0.38	130	130	S7035, AeroWave 360	50	90	S7035B, AeroBond 360	50	90
		0.63	130	140	S7035, AeroWave 360	50	90	S7035B, AeroBond 360	50	90



		1.40	130	140	S7035, AeroWave 360	50	90	S7035B, AeroBond 360	50	90
<b>S7036</b>	FR-4.0	0.20	120	130	S7036	50	90	S7036B	50	90
		0.38	130	130	S7036	50	90	S7036B	50	90
		0.63	130	140	S7036	50	90	S7036B	50	90
		1.40	130	140	S7036	50	90	S7036B	50	90
<b>S7038, SL7038</b>	FR-4.0	0.20	120	130	S7038, SL7038	50	90	S7038B, SL7038B	50	90
		0.38	130	130	S7038, SL7038	50	90	S7038B, SL7038B	50	90
		0.63	130	140	S7038, SL7038	50	90	S7038B, SL7038B	50	90
		1.40	130	140	S7038, SL7038	50	90	S7038B, SL7038B	50	90
<b>S7038V</b>	FR-4.0	0.20	120	130	S7038V	50	90	S7038VB	50	90
		0.38	130	130	S7038V	50	90	S7038VB	50	90
		0.63	130	140	S7038V	50	90	S7038VB	50	90
		1.40	130	140	S7038V	50	90	S7038VB	50	90
<b>S7040G</b>	FR-4.1	0.20	120	120	S7040G	30	90	S7040GB	30	90
		0.38	130	130	S7040G	30	90	S7040GB	30	90
		0.63	130	140	S7040G	30	90	S7040GB	30	90
		1.40	130	140	S7040G	30	90	S7040GB	30	90
<b>S7040GX</b>	FR-4.1	0.20	120	120	S7040GX	30	90	S7040GXB	30	90
		0.38	130	130	S7040GX	30	90	S7040GXB	30	90
		0.63	130	140	S7040GX	30	90	S7040GXB	30	90
		1.40	130	140	S7040GX	30	90	S7040GXB	30	90
<b>S7045G</b>	FR-4.1	0.10	120	130	S7045G	30	120	S7045GB	30	120
		0.20	130	130	S7045G	30	120	S7045GB	30	120
		0.38	130	130	S7045G	30	120	S7045GB	30	120
		0.63	130	140	S7045G	30	120	S7045GB	30	120
		1.40	130	140	S7045G	30	120	S7045GB	30	120
<b>S7045GX</b>	FR-4.1	0.20	120	120	S7045GX	30	90	S7045GXB	30	90
		0.38	130	130	S7045GX	30	90	S7045GXB	30	90
		0.63	130	140	S7045GX	30	90	S7045GXB	30	90

		1.40	130	140	S7045GX	30	90	S7045GXB	30	90
<b>S7135D</b>	No ANSI	0.16	160	90	S7135D	50	50	S7135D	50	50
		0.50	160	130	S7135D	50	50	S7135D	50	50
		0.76	160	160	S7135D	50	50	S7135D	50	50
		1.52	170	170	S7135D	50	50	S7135D	50	50
<b>S7135D2</b>	No ANSI	0.16	160	90	S7135D2	50	50	S7135D2	50	50
		0.50	160	130	S7135D2	50	50	S7135D2	50	50
		0.76	160	160	S7135D2	50	50	S7135D2	50	50
		1.52	170	170	S7135D2	50	50	S7135D2	50	50
<b>S7136D</b>	No ANSI	0.16	160	90	S7136D	50	50	S7136D	50	50
		0.50	160	130	S7136D	50	50	S7136D	50	50
		0.76	160	160	S7136D	50	50	S7136D	50	50
		1.52	170	170	S7136D	50	50	S7136D	50	50
<b>S7136H</b>	No ANSI	0.38	150	140	S7136H	85	50	S7136HB	85	50
<b>S7242</b>	No ANSI	0.38	90	90	S7242	50	50	S7242B	50	50
		0.63	90	90	S7242	50	50	S7242B	50	50
		1.40	90	90	S7242	50	50	S7242B	50	50
<b>S7338, S7335, Synamic 6, Synamic 6N</b>										
	No ANSI	0.80	150	130	S7338, S7335, Synamic 6, Synamic 6N	40	50	S7338B, S7335B, Synamic 6B, Synamic 6NB	40	50
<b>S7439G</b>	FR-15.1	0.20	150	140	S7439G	30	120	S7439GB	30	120
		0.38	150	150	S7439G	30	120	S7439GB	30	120
		0.63	150	150	S7439G	30	120	S7439GB	30	120
		1.40	150	150	S7439G	30	120	S7439GB	30	120
<b>S7439GS</b>	FR-15.1	0.15	150	150	S7439GS	50	140	S7439GSB	50	140
<b>S7542G (Note 1)</b>	No ANSI	0.20	90	90	S7542G	30	90	S7542GB	30	90
<b>S7641G</b>	FR-15.1	0.10	130	150	S7641G	25	130	S7641GB	25	130
		0.20	140	150	S7641G	25	130	S7641GB	25	130

		0.38	150	150	S7641G	25	130	S7641GB	25	130
		0.63	150	150	S7641G	25	130	S7641GB	25	130
		1.40	150	150	S7641G	25	130	S7641GB	25	130
<b>S7645G</b>	FR-15.1	0.10	130	150	S7645G	25	130	S7645GB	25	130
		0.20	140	150	S7645G	25	130	S7645GB	25	130
		0.38	150	150	S7645G	25	130	S7645GB	25	130
		0.63	150	150	S7645G	25	130	S7645GB	25	130
		1.40	150	150	S7645G	25	130	S7645GB	25	130
<b>S7735D2/ S7735D2B</b>										
	No ANSI	0.20	160	160	S7735D2	100	155	S7735D2B	100	155
		0.38	160	170	S7735D2	100	155	S7735D2B	100	155
		0.63	160	200	S7735D2	100	155	S7735D2B	100	155
<b>S7735GD2</b>	FR-15.1	0.15	150	150	S7735GD2	50	140	S7735GD2B	50	140
<b>S78</b>	No ANSI	0.20	100	105	S78	40	95	S78B	40	95
		0.38	125	115	S78	40	95	S78B	40	95
<b>SB170G</b>	No ANSI	0.20	95	130	SB170G	50	50	SB170GB	50	50
		0.38	105	130	SB170G	50	50	SB170GB	50	50
		0.70	115	130	SB170G	50	50	SB170GB	50	50
		1.50	130	140	SB170G	50	50	SB170GB	50	50
<b>SDI06K</b>	FR-15.1	0.10	130	150	SDI06K	25	130	SDI06KB	25	130
		0.20	140	150	SDI06K	25	130	SDI06KB	25	130
		0.38	150	150	SDI06K	25	130	SDI06KB	25	130
		0.63	150	150	SDI06K	25	130	SDI06KB	25	130
		1.40	150	150	SDI06K	25	130	SDI06KB	25	130
<b>SDI07K</b>	FR-15.1	0.10	130	150	SDI07K	25	130	SDI07KB	25	130
		0.20	140	150	SDI07K	25	130	SDI07KB	25	130
		0.38	150	150	SDI07K	25	130	SDI07KB	25	130
		0.63	150	150	SDI07K	25	130	SDI07KB	25	130
		1.40	150	150	SDI07K	25	130	SDI07KB	25	130

<b>SE40, S7439, S7439HW, S7439C</b>										
	No ANSI	0.20	120	130	SE40, S7439, S7439HW, S7439C	50	50	SE40B, S7439B, S7439HWB, S7439CB	50	50
		0.38	160	160	SE40, S7439, S7439HW, S7439C	50	50	SE40B, S7439B, S7439HWB, S7439CB	50	50
		0.63	170	160	SE40, S7439, S7439HW, S7439C	50	50	SE40B, S7439B, S7439HWB, S7439CB	50	50
		1.40	180	170	SE40, S7439, S7439HW, S7439C	50	50	SE40B, S7439B, S7439HWB, S7439CB	50	50
<b>SE80, SDI03, SDI03K, LSDI03K</b>										
	FR-4.1	0.10	130	130	SE80, SDI03, SDI03K, LSDI03K	30	90	SE80B, SDI03B, SDI03KB, LSDI03KB	30	90
		0.38	130	130	SE80, SDI03, SDI03K, LSDI03K	30	90	SE80B, SDI03B, SDI03KB, LSDI03KB	30	90
		0.63	130	140	SE80, SDI03, SDI03K, LSDI03K	30	90	SE80B, SDI03B, SDI03KB, LSDI03KB	30	90
		1.40	130	140	SE80, SDI03, SDI03K	30	90	SE80B, SDI03B, SDI03KB	30	90
<b>SH260, SH260M</b>	No ANSI	0.20	50	50	SH260, SH260M	40	50	SH260B	40	50
<b>SI05NF</b>	FR-15.1	0.10	130	150	SI05NF	25	130	SI05NFB	25	130
		0.20	140	150	SI05NF	25	130	SI05NFB	25	130
		0.38	150	150	SI05NF	25	130	SI05NFB	25	130
		0.63	150	150	SI05NF	25	130	SI05NFB	25	130
		1.40	150	150	SI05NF	25	130	SI05NFB	25	130
<b>SI07N</b>	FR-15.1	0.10	130	150	SI07N	25	130	SI07NB	25	130
		0.20	140	150	SI07N	25	130	SI07NB	25	130
		0.38	150	150	SI07N	25	130	SI07NB	25	130
		0.63	150	150	SI07N	25	130	SI07NB	25	130
		1.40	150	150	SI07N	25	130	SI07NB	25	130
<b>SI10U(S)</b>	No ANSI	0.10	70	90	SI10U(S)	40	70	SI10NB(S)	40	70
		0.20	85	90	SI10U(S)	40	70	SI10NB(S)	40	70

		0.38	90	90	SI10U(S)	40	70	SI10NB(S)	40	70
		0.63	95	90	SI10U(S)	40	70	SI10NB(S)	40	70
		1.60	120	105	SI10U(S)	40	70	SI10NB(S)	40	70
<b>SI10USR/SI10NSRB</b>										
	No ANSI	0.10	50	50	SI10USR	30	50	SI10NSRB	30	50
<b>SI13U/SI13NB</b>	No ANSI	0.10	50	50	SI13U	30	50	SI13NB	30	50
<b>SI242D</b>	No ANSI	0.20	130	105	SI242D	40	50	SI242DB	30	50
		0.38	140	115	SI242D	40	50	SI242DB	30	50
		0.71	150	155	SI242D	40	50	SI242DB	30	50
		1.50	160	155	SI242D	40	50	SI242DB	30	50
<b>SI246, SI246U</b>	No ANSI	0.10	70	90	SI246, SI246U	40	70	SI246B, SI246UB	40	70
		0.20	85	90	SI246, SI246U	40	70	SI246B, SI246UB	40	70
		0.38	90	90	SI246, SI246U	40	70	SI246B, SI246UB	40	70
		0.63	95	90	SI246, SI246U	40	70	SI246B, SI246UB	40	70
		1.60	120	105	SI246, SI246U	40	70	SI246B, SI246UB	40	70
<b>SI64X, SI643, SI643U, SI643HU</b>										
	No ANSI	0.20	95	110	SI64X, SI643, SI643U, SI643HU	40	90	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	30	90
		0.38	100	110	SI64X, SI643, SI643U, SI643HU	40	90	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	30	90
		0.63	110	110	SI64X, SI643, SI643U, SI643HU	40	90	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	30	90
		1.60	120	125	SI64X, SI643, SI643U, SI643HU	40	90	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	30	90
<b>SML02G, SI543</b>	FR-15.1	0.10	130	140	SML02G, SI543	30	90	SML02GB, SI543B	30	90
		0.38	150	150	SML02G, SI543	30	90	SML02GB, SI543B	30	90
		0.63	150	150	SML02G, SI543	30	90	SML02GB, SI543B	30	90
		1.40	150	150	SML02G, SI543	30	90	SML02GB, SI543B	30	90

<b>SP170G</b>	No ANSI	0.10	50	50	-	-	-	SP170G	50	50
<b>SP170N</b>	No ANSI	0.10	50	50	-	-	-	SP170N	50	50
<b>ST110</b>	FR- 4.0	0.20	130	130	ST110	50	90	ST110B	50	90
		0.63	130	140	ST110	50	90	ST110B	50	90
<b>ST110G</b>	No ANSI	0.10	160	150	ST110G	50	90	ST110GB	50	90
		0.20	160	160	ST110G	50	90	ST110GB	50	90
		0.70	170	160	ST110G	50	90	ST110GB	50	90
<b>ST115, ST115D</b>	FR- 4.0	0.20	130	130	ST115, ST115D	50	90	ST115B, ST115DB	50	90
		0.38	130	130	ST115, ST115D	50	90	ST115B, ST115DB	50	90
		0.63	130	140	ST115, ST115D	50	90	ST115B, ST115DB	50	90
		1.40	130	140	ST115, ST115D	50	90	ST115B, ST115DB	50	90
<b>ST115G</b>	No ANSI	0.10	160	150	ST115G	50	90	ST115GB	50	90
		0.20	160	160	ST115G	50	90	ST115GB	50	90
		0.70	170	160	ST115G	50	90	ST115GB	50	90
<b>SU1301, S1155K, SL1155K</b>										
	FR- 4.1	0.10	120	130	SU1301, S1155K, SL1155K	30	105	SU1301B, S1155KB, SL1155KB	30	105
		0.20	130	130	SU1301, S1155K	30	105	SU1301B, S1155KB, SL1155KB	30	105
		0.63	130	140	SU1301, S1155K, SL1155K	30	105	SU1301B, S1155KB, SL1155KB	30	105
<b>SU1304</b>	No ANSI	0.10	70	90	SU1304	40	70	SU1304B	40	70
		0.20	85	90	SU1304	40	70	SU1304B	40	70
		0.38	90	90	SU1304	40	70	SU1304B	40	70
		0.63	95	90	SU1304	40	70	SU1304B	40	70
		1.60	120	105	SU1304	40	70	SU1304B	40	70
<b>SU1305</b>	FR- 4.1	0.10	130	130	SU1305	30	120	SU1305B	30	120
		0.20	130	140	SU1305	30	120	SU1305B	30	120

<b>SU1402</b>	No ANSI	0.38	170	170	SU1402	85	50	SU1402B	85	50
		1.60	180	170	SU1402	85	50	SU1402B	85	50
<b>SU1501</b>		0.10	160	160	SU1501	30	90	SU1501B	30	90
<b>SU1504</b>	No ANSI	0.20	90	90	SU1504	50	90	SU1504B	50	90
		0.38	90	90	SU1504	50	90	SU1504B	50	90
		0.80	90	90	SU1504	50	90	SU1504B	50	90
		1.60	90	90	SU1504	50	90	SU1504B	50	90
<b>SU1603</b>	No ANSI	0.20	150	150	SU1603	50	65	SU1603B	40	65
		0.38	160	150	SU1603	50	65	SU1603B	40	65
		0.80	160	150	SU1603	50	65	SU1603B	40	65
		1.50	160	150	SU1603	50	65	SU1603B	40	65
<b>SU1609</b>	No ANSI	0.10	90	90	SU1609	25	90	SU1609B	25	90
		0.20	90	90	SU1609	25	90	SU1609B	25	90
		0.38	90	90	SU1609	25	90	SU1609B	25	90
		0.63	90	90	SU1609	25	90	SU1609B	25	90
		1.50	90	90	SU1609	25	90	SU1609B	25	90
<b>SU1611</b>	No ANSI	0.20	50	50	SU1611	50	50	SU1611B	50	50
		0.38	50	50	SU1611	50	50	SU1611B	50	50
		0.63	50	50	SU1611	50	50	SU1611B	50	50
		1.50	50	50	SU1611	50	50	SU1611B	50	50
<b>SU1615</b>	No ANSI	0.10	95	110	SU1615	30	90	SU1615B	30	90
		0.20	110	120	SU1615	30	90	SU1615B	30	90
		0.38	125	125	SU1615	30	90	SU1615B	30	90
		0.63	140	125	SU1615	30	90	SU1615B	30	90
		1.40	150	140	SU1615	30	90	SU1615B	30	90
<b>SU1621</b>	No ANSI	0.20	90	115	SU1621	30	90	SU1621B	30	90
		0.38	90	115	SU1621	30	90	SU1621B	30	90
		0.80	90	115	SU1621	30	90	SU1621B	30	90
		1.60	100	120	SU1621	30	90	SU1621B	30	90

<b>SU1804</b>	No ANSI	0.10	130	140	SU1804	25	50	SU1804B	25	50
		0.20	150	160	SU1804	25	50	SU1804B	25	50
		0.38	155	160	SU1804	25	50	SU1804B	25	50
		0.63	170	170	SU1804	25	50	SU1804B	25	50
		1.40	170	180	SU1804	25	50	SU1804B	25	50
<b>SU1903</b>	No ANSI	0.20	180	170	SU1903	50	90	SU1903B	50	90
		0.38	180	180	SU1903	50	90	SU1903B	50	90
<b>Synamic6GX</b>	FR-15.1	0.15	150	150	Synamic6GX	50	140	Synamic6GXB	50	140
<b>Synamic8G</b>	No ANSI	0.20	130	140	Synamic8G	50	50	Synamic8GB	50	50
		0.38	140	150	Synamic8G	50	50	Synamic8GB	50	50
		0.75	140	160	Synamic8G	50	50	Synamic8GB	50	50
		1.50	140	170	Synamic8G	50	50	Synamic8GB	50	50
<b>Synamic8GN</b>	No ANSI	0.20	130	140	Synamic8GN	50	50	Synamic8GNB	50	50
		0.38	140	150	Synamic8GN	50	50	Synamic8GNB	50	50
		0.75	140	160	Synamic8GN	50	50	Synamic8GNB	50	50
		1.50	140	170	Synamic8GN	50	50	Synamic8GNB	50	50
<b>Synamic8GX</b>	No ANSI	0.20	130	140	Synamic8GX	50	50	Synamic8GXB	50	50
		0.38	140	150	Synamic8GX	50	50	Synamic8GXB	50	50
		0.75	140	160	Synamic8GX	50	50	Synamic8GXB	50	50
		1.50	140	170	Synamic8GX	50	50	Synamic8GBX	50	50
<b>Synamic8N</b>	No ANSI	0.10	50	50	Synamic8N	50	50	Synamic8NB	50	50
<b>Synamic9N/ Synamic9NB</b>										
	No ANSI	0.10	50	50	Synamic9N	50	50	Synamic9NB	50	50
<b>WLM1</b>	No ANSI	0.10	-	-	WLM1	30	-	WLM1B	30	-

**Base films (declad materials):**

Mtl Dsg	Color	Film		Adhesive		R.T.I.			H				Meets 746E DSR
		Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Flame Class	Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I	



<b>Liquid Crystal Polymer (LCP) Base films (Adhesiveless) furnished as sheets or rolls</b>													
<b>SF701</b>	NC	0.025	0.025	-	-	VTM-0	130	130	4	2	-	-	Yes
	NC	0.050	0.050	-	-	VTM-0	130	130	4	1	-	4	Yes
<b>Polyamide-imide Base films with adhesive on one or both sides,</b>													
<b>M215</b>	BK	0.003	0.007	-	-	VTM-0	-	-	-	-	-	-	-
<b>Polyethylene Terephthalate (PET) Base films with Polyester adhesive required on both sides, furnished as sheets or rolls</b>													
<b>BIF202</b>	NC	0.125	0.125	30	38	VTM-0	105	105	0	0	-	-	Yes
	NC	0.125	0.188	20	20	VTM-2	105	105	4	0	-	-	Yes
	NC	0.188	0.188	30	30	VTM-1	105	105	4	0	-	-	Yes
	NC	0.188	0.188	38	38	V-2	105	105	4	0	-	1	Yes
<b>Polyethylene Terephthalate (PET) Base films with Polyester adhesive on one side only, furnished as sheets or rolls</b>													
<b>BIF201</b>	WT	0.125	0.125	20	38	VTM-2	105	105	0	0	-	-	Yes
	WT	0.175	0.175	38	38	VTM-2	105	105	0	0	-	1	Yes
<b>Polyimide (PI) Base films (Adhesiveless) furnished as sheets or rolls</b>													
<b>SF212</b>	NC	0.0125	0.0125	-	-	VTM-0	220	240	0	4	-	-	-
	NC	0.020	0.020	-	-	VTM-0	240	240	0	3	-	-	Yes
	NC	0.025	0.025	-	-	V-0	240	240	0	3	-	3	Yes
	NC	0.050	0.050	-	-	V-0	260	260	0	1	-	3	Yes
<b>SF230</b>	NC	0.0125	0.0125	-	-	VTM-0	130	130	0	3	-	-	Yes
	NC	0.020	0.020	-	-	VTM-0	130	130	0	3	-	-	Yes
	NC	0.025	0.025	-	-	VTM-0	130	130	0	1	-	-	Yes
	NC	0.050	0.050	-	-	V-0	130	130	0	0	-	4	Yes
<b>DL</b>	NC	0.009	0.049	-	-	VTM-0	130	130	0	4	-	-	-
	NC	0.050	0.050	-	-	VTM-0	130	130	0	1	-	4	Yes
<b>SL</b>	NC	0.009	0.049	-	-	VTM-0	130	130	0	4	-	-	-
	NC	0.050	0.050	-	-	VTM-0	130	130	0	1	-	4	Yes
<b>Polyimide (PI) Base films with Epoxy adhesive on one or both sides, furnished as sheets or rolls</b>													
<b>SF305</b>	NC	0.0125	0.0125	10	14	VTM-0	240	200	4	4	-	2	-
	NC	0.0125	0.050	15	24	V-0	240	200	4	4	-	2	-
	NC	0.0125	0.050	25	25	V-0	240	200	4	3	-	2	Yes
<b>Polyimide (PI) Base films with Epoxy (EP) adhesive on one side only, furnished as sheets or rolls</b>													
<b>SF280</b>	NC	0.0125	0.0125	25	100	V-0	130	130	4	0	-	3	Yes

<b>SFOPT</b>	NC	0.0125	0.0125	25	100	V-0	130	130	4	0	-	3	Yes
<b>Polyimide (PI) Base films with Polyimide adhesive on one or both sides, furnished as sheets</b>													
<b>SF202</b>	NC	0.0125	0.025	-	-	VTM-0	130	130	0	4	-	3	-
	NC	0.038	0.038	-	-	V-0	130	130	0	2	-	3	Yes
	NC	0.050	0.050	-	-	V-0	130	130	0	1	-	3	Yes

**Metal clad films:**

Metal Clad Dsg	Lam-inate Dsg	Pre-preg Dsg	Film		Adhesive		Clad Cond Thk			Max Area Dia	Max Flame Class	Max Oper Temp (°C)	Assembly Process Temp(°C)	Solder Process Cycles	Solder Temp (°C)	Solder Lt. Time (sec)
			Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)							
<b>Liquid Crystal Polymer (LCP) (Adhesiveless) Metal clad films For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets or rolls</b>																
<b>SF701</b>	SF701	-	0.25	0.05	-	-	12	35	-	50.8	VTM-0	130	-	-	288	10
<b>Polyimide (PI) (Adhesiveless) Metal clad films For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets or rolls</b>																
<b>SF212</b>	SF212	-	0.0125	0.125	-	-	6	102	-	50.8	VTM-0	150	-	-	300	10
			0.020	0.020	-	-	6	102	-	50.8	VTM-0	150	-	-	300	10
			0.025	0.025	-	-	6	102	-	50.8	V-0	150	-	-	300	10
			0.050	0.050	-	-	6	102	-	50.8	V-0	150	-	-	300	10
<b>SF230</b>	SF230	-	0.0125	0.125	-	-	6	70	-	50.8	VTM-0	130	-	-	300	10
			0.020	0.020	-	-	6	70	-	50.8	VTM-0	130	-	-	300	10
			0.025	0.025	-	-	6	70	-	50.8	VTM-0	130	-	-	300	10
			0.050	0.050	-	-	6	70	-	50.8	V-0	130	-	-	300	10
<b>Polyimide (PI) With Epoxy adhesive Metal clad films For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets or rolls</b>																
<b>SF305</b>	SF305	-	0.0125	0.0125	10	14	12	102	-	50.8	VTM-0	130	-	-	288	10
			0.0125	0.050	15	25	12	102	-	50.8	V-0	130	-	-	288	10
<b>Polyimide (PI) With Epoxy (EP) adhesive Metal clad films For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets or rolls</b>																
<b>SF280</b>	SF280	-	0.0125	0.0125	25	100	12	35	-	50.8	V-0	130	-	-	288	10
<b>SFOPT</b>	SFOPT	-	0.0125	0.0125	25	100	12	35	-	50.8	V-0	130	-	-	288	10

**Polyimide (PI) With Polyimide adhesive Metal clad films For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets or rolls**

<b>SF202</b>	SF202	-	0.0125	0.025	-	-	6	70	-	50.8	VTM-0	130	-	-	300	10
			0.038	0.050	-	-	6	70	-	50.8	V-0	130	-	-	300	10

**Metal clad industrial laminates:**

Metal Clad Dsg	Lam-inate Dsg	Pre-preg Dsg	ANSI Type	Bld up		Clad Cond Thk			Max Area Dia	Max Flame Class	Max Oper Temp (°C)	Assembly Process Temp(°C)	Solder Process Cycles
				Min Thk (mm)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)						

**Benzoxazines, Phenolic, Epoxy Metal clad industrial laminates For use In multilayer printed wiring boards With copper On sides, furnished As sheets**

<b>S1135G</b>	S1135G	S1135GB	No ANSI	0.20^	12	102	12	50.8	V-0	120	-	-
				0.38^	12	102	70	50.8	V-0	120	-	-

**Epoxy (EP) Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides, sheets**

<b>S1135, S7546</b>	S1135, S7546	S1135B, S7546B	No ANSI	0.20	9	102	70	50.8	V-0	95	-	-
				0.38	9	102	70	50.8	V-0	105	-	-
				0.70	9	102	70	50.8	V-0	115	-	-
				1.50	9	102	70	50.8	V-0	130	-	-
<b>S1155M/ S1155MB</b>	S1155M	S1155MB	No ANSI	0.10	12	102	18	50.8	V-0	130	-	-
				0.20	12	102	70	50.8	V-0	130	-	-
<b>S7242</b>	S7242	S7242B	No ANSI	0.38	9	102	70	50.8	V-0	90	-	-
<b>SB170G</b>	SB170G	SB170GB	No ANSI	0.20	9	102	70	50.8	V-0	95	-	-
				0.38	9	102	70	50.8	V-0	105	-	-
				0.70	9	102	70	50.8	V-0	115	-	-
				1.50	9	102	70	50.8	V-0	130	-	-

**Epoxy (EP) Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both side As sheets**

<b>S1135, S7546</b>	S1135, S7546	-	No ANSI	0.20	9	102	-	50.8	V-0	95	-	-
				0.38	9	102	-	50.8	V-0	105	-	-
				0.70	9	102	-	50.8	V-0	115	-	-

				1.50	9	102	-	50.8	V-0	130	-	-
<b>S1155M</b>	S1155M	-	No ANSI	0.10	12	102	-	50.8	V-0	130	-	-
<b>S7242</b>	S7242	-	No ANSI	0.38	9	102	-	50.8	V-0	90	-	-
<b>SB170G</b>	SB170G	-	No ANSI	0.20	9	102	-	50.8	V-0	95	-	-
				0.38	9	102	-	50.8	V-0	105	-	-
				0.70	9	102	-	50.8	V-0	115	-	-
				1.50	9	102	-	50.8	V-0	130	-	-

**Epoxy (EP) Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both side**

<b>S3155G</b>	S3155G	-	No ANSI	0.63	18	102	-	50.8	V-0	90	-	-
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**Epoxy blend Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both side As sheets**

**SE40, S7439, S7439HW, S7439C**

	SE40, S7439, S7439HW, S7439C	SE40B, S7439B, S7439HWB, S7439CB	No ANSI	0.20	12	102	70	50.8	V-0	120	-	-
				0.38	12	102	70	50.8	V-0	130	-	-
				0.63	12	102	70	50.8	V-0	130	-	-
				1.40	12	102	70	50.8	V-0	130	-	-
<b>SI242D</b>	-	-	No ANSI	0.20	9	102	70	50.8	V-0	105	-	-
				0.38	9	102	70	50.8	V-0	115	-	-
				0.71	9	102	70	50.8	V-0	140	-	-
				1.50	9	102	70	50.8	V-0	140	-	-

**Epoxy blend Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both side As sheets**

**SE40, S7439, S7439HW, S7439C**

	SE40, S7439, S7439HW, S7439C	-	No ANSI	0.20	12	102	-	50.8	V-0	120	-	-
				0.38	12	102	-	50.8	V-0	130	-	-
				0.63	12	102	-	50.8	V-0	130	-	-
				1.40	12	102	-	50.8	V-0	130	-	-

<b>SI242D</b>	SI242D	-	No ANSI	0.04	11	102	-	50.8	V-0	90	-	-
				0.20	11	102	-	50.8	V-0	105	-	-
				0.38	11	102	-	50.8	V-0	115	-	-
				0.71	11	102	-	50.8	V-0	140	-	-
				1.50	11	102	-	50.8	V-0	140	-	-
<b>Epoxy with Filler Al(OH)3 Metal clad industrial laminates For use In Single layer printed wiring boards With copper On or sides, furnished As sheets</b>												
<b>S2600R</b>	S2600R	-	No ANSI	0.63	17	102	-	50.8	V-0	90	-	-
<b>Modified Polyphenylene ether Metal clad industrial laminates For use In multilayer printed wiring boards With copper On sides, furnished As sheets</b>												
<b>S7338, S7335, Synamic 6, Synamic 6N/S7338B, S7335B, Synamic 6B, Synamic 6NB</b>												
	S7338, S7335, Synamic 6, Synamic 6N	S7338B, S7335B, Synamic 6B, Synamic 6NB	No ANSI	0.80	9	102	70	50.8	V-0	130	-	-
<b>Modified Polyphenylene ether Metal clad industrial laminates For use In Single layer printed wiring boards With copper On both sides, furnished As sheets</b>												
<b>mmWave</b>	mmWave	-	No ANSI	0.38	9	102	-	50.8	V-0	115	-	-
				0.80	9	102	-	50.8	V-0	130	-	-
<b>S7335, S7338, Synamic 6, Synamic 6N</b>												
	S7335, S7338, Synamic 6, Synamic 6N	-	No ANSI	0.80	9	102	-	50.8	V-0	130	-	-
<b>Polyimide blend Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets</b>												
<b>S1220, S7643</b>	S1220, S7643	-	No ANSI	0.04	12	102	-	50.8	V-0	90	-	-
				0.20	12	102	-	50.8	V-0	95	-	-
				0.63	12	102	-	50.8	V-0	110	-	-
				1.60	12	102	-	50.8	V-0	120	-	-
<b>SI64X, SI643, SI643U, SI643HU</b>												
	SI64X, SI643, SI643U, SI643HU	-	No ANSI	0.04	12	102	-	50.8	V-0	90	-	-
				0.20	12	102	-	50.8	V-0	95	-	-

				0.38	12	102	-	50.8	V-0	100	-	-
				0.63	12	102	-	50.8	V-0	110	-	-
				1.60	12	102	-	50.8	V-0	120	-	-

**Polyphenylene Oxide Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one O furnished As sheets**

<b>S7135</b>	-	-	No ANSI	0.16	17	102	-	50.8	V-0	65	-	-
				0.50	17	102	-	50.8	V-0	85	-	-
				0.80	17	102	-	50.8	V-0	90	-	-
				1.60	17	102	-	50.8	V-0	95	-	-

**Metal clad multilayer package (mass laminate) With internal circuitry And solid copper On outside surfaces, furnished As**

<b>S1130</b>	S1130	-	FR-4.0	0.22	12	68	-	50.8	V-0	130	-	-
<b>S1170</b>	S1170	S0701	FR-4.0	0.38	17	102	68	50.8	V-0	130	-	-

**Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides, furnished As**

<b>AeroWave 300</b>	AeroWave 300	AeroBond 300	No ANSI	0.20	12	102	70	50.8	V-0	100	-	-
				0.38	12	102	70	50.8	V-0	115	-	-

**Autolad2/Autolad2B**

	Autolad2	Autolad2B	FR-4.0	0.38	9	102	70	50.8	V-0	130	-	-
<b>S1000</b>	S1000	S1000B	FR-4.0	0.38	15	102	65	50.8	V-0	130	-	-
<b>S1000-2, S-2(C)</b>	S1000-2, S-2	S1000-2B, S-2B	FR-4.0	0.38	15	102	65	50.8	V-0	130	-	-

**S1000-2M, Autolad3 (ASP 1)**

	S1000-2M, Autolad3	S1000-2MB, SP170M, Autolad3B	FR-4.0	0.20	12	102	70	50.8	V-0	130	-	-
				0.25	17	102	70	50.8	V-0	130	260	6
<b>S1130</b>	S1130	S0101	FR-4.0	0.38	12	68	-	50.8	V-0	130	-	-

**S1141, S1141-4, S1141 150, S1141 170, S1151 (ASP 1)**

	S1141, S1141-4, S1141 150, S1141 170, S1151	S0401, S0401-4, S0401 150, S0401 170, S1151B	FR-4.0	0.38	8.5	102	70	50.8	V-0	130	-	-
				0.38	17	102	70	50.8	V-0	130	260	3

<b>S1141KF</b>	S1141KF	S0401KF	FR-4.0	0.38	8.5	102	68	50.8	V-0	130	-	-
<b>S1150</b>	S1150	S1150B	FR-4.0	0.38	9	102	70	50.8	V-0	130	-	-
<b>S1150F, S1140F, S1141-4F</b>												
	S1150F, S1140F, S1141-4F	S1150FB, S1140FB, S0401-4F	FR-4.0	0.38	9	102	70	50.8	V-0	130	-	-
<b>S1151G</b>	S1151G	S1151GB	FR-4.1	0.38	12	102	68	50.8	V-0	130	-	-
				0.25	12	102	68	50.8	V-0	110	-	-
<b>S1152G</b>	S1152G	S1152GB	FR-4.1	0.10	12	102	68	50.8	V-0	130	-	-
<b>S1165, SI546, S7542K</b>												
	S1165, SI546, S7542K	S0165, SI546B, S7542KB	No ANSI	0.38	9	102	68	50.8	V-0	130	-	-
<b>S1165G</b>	S1165G	S1165GB	FR-4.1	0.38	9	102	68	50.8	V-0	130	-	-
<b>S1170</b>	S1170	S0701	FR-4.0	0.38	17	102	68	50.8	V-0	130	-	-
<b>S1170F</b>	S1170F	S1170FB	FR-4.0	0.20	12	102	70	50.8	V-0	130	-	-
<b>S1170G, S7045GH/ S1170GB, S7045GHB</b>												
	S1170G, S7045GH	S1170GB, S7045GHB	FR-15.1	0.10	12	102	18	50.8	V-0	140	-	-
				0.20	12	102	70	50.8	V-0	150	-	-
<b>S1170M</b>	S1170M	S0701M	FR-4.0	0.20	9	102	68	50.8	V-0	130	-	-
<b>S1180G</b>	S1180G	S1180GB	FR-4.1	0.38	9	102	68	50.8	V-0	130	-	-
<b>S1190</b>	S1190	S1190B	FR-4.0	0.20	9	102	68	50.8	V-0	130	-	-
<b>S1190M</b>	S1190M	S1190MB	FR-15.0	0.20	9	102	68	50.8	V-0	130	-	-
<b>S1210G/ S1210GB</b>	S1210G	S1210GB	FR-15.1	0.10	12	102	70	50.8	V-0	130	-	-
<b>S1250G/ S1250GB</b>	S1250G	S1250GB	FR-15.1	0.10	12	102	70	50.8	V-0	130	-	-
<b>S1440</b>	S1440	S0440	FR-4.0	0.38	9.0	70	-	50.8	V-0	130	-	-

<b>S1600H/S1600HB</b>	S1600H	S1600HB	FR-4.0	0.38	9	102	70	50.8	V-0	130	-	-
<b>S1600L/S1600LB</b>	S1600L	S1600LB	FR-4.0	0.38	9	102	70	50.8	V-0	130	-	-
<b>S168GL/SP168GL</b>	S168GL	SP168GL	FR-4.1	0.10	12	102	70	50.8	V-0	120	-	-
				0.20	12	102	70	50.8	V-0	130	-	-
<b>S168GN/SP168GN (ASP 1)</b>												
	S168GN	SP168GN	FR-15.1	0.20	12	102	68	50.8	V-0	130	-	-
				0.20	12	102	68	50.8	V-0	130	260	6
<b>S1860</b>	S1860	S1860B	FR-4.0	0.38	17	68	-	50.8	V-0	130	-	-
<b>S225G/SP225G (ASP 1)</b>												
	S225G	SP225G	FR-15.1	0.20	12	102	68	50.8	V-0	130	-	-
				0.20	12	102	68	50.8	V-0	130	260	6
<b>S7038, SL7038</b>	S7038, SL7038	S7038B, SL7038B	FR-4.0	0.20	17	102	68	50.8	V-0	120	-	-
				0.38	17	102	68	50.8	V-0	130	-	-
<b>S7040G/S7040GB</b>	S7040G	S7040GB	FR-4.1	0.24	12	102	68	50.8	V-0	120	-	-
				0.38	12	102	68	50.8	V-0	130	-	-
<b>S7040GX/ S7040GXB</b>												
	S7040GX	S7040GXB	FR-4.1	0.24	12	102	68	50.8	V-0	120	-	-
				0.38	12	102	68	50.8	V-0	130	-	-
<b>S7045G/ S7045GB (ASP 1)</b>												
	S7045G	S7045GB	FR-4.1	0.10	12	102	18	50.8	V-0	120	-	-
				0.20	12	102	70	50.8	V-0	130	-	-
				0.20	12	102	70	50.8	V-0	130	260	6
<b>S7045GX/ S7045GXB</b>												
	S7045G	S7045GXB	FR-4.1	0.24	12	102	68	50.8	V-0	120	-	-
				0.38	12	102	68	50.8	V-0	130	-	-
<b>S7641G/S7641GB</b>	S7641G	S7641GB	FR-15.1	0.10	12	102	70	50.8	V-0	130	-	-



<b>S7645G/S7645GB</b>	S7645G	S7645GB	FR-15.1	0.10	12	102	70	50.8	V-0	130	-	-
<b>S78</b>	S78	S78B	No ANSI	0.20	12	102	70	50.8	V-0	100	-	-
				0.38	12	102	70	50.8	V-0	115	-	-
<b>SDI06K/ SDI06KB</b>	SDI06K	SDI06KB	FR-15.1	0.10	12	102	70	50.8	V-0	130	-	-
<b>SDI07K/SDI07KB</b>	SDI07K	SDI07KB	FR-15.1	0.10	12	102	70	50.8	V-0	130	-	-
<b>SI05NF/SI05NFB</b>	SI05NF	SI05NFB	FR-15.1	0.10	12	102	70	50.8	V-0	130	-	-
<b>SI07N/SI07NB</b>	SI07N	SI07NB	FR-15.1	0.10	12	102	70	50.8	V-0	130	-	-
<b>ST115, ST115D</b>	ST115	ST115B	FR-4.0	0.38	12	102	70	50.8	V-0	130	-	-
<b>SU1301/SU1301B, S1155K/S1155KB, SL1155K/SL1155KB</b>												
	SU1301, S1155K, SL1155K	SU1301B, S1155KB, SL1155KB	FR-4.1	0.10	12	102	70	50.8	V-0	120	-	-
				0.20	12	102	70	50.8	V-0	130	-	-
<b>SU1305/ SU1305B</b>	SU1305	SU1305B	FR-4.1	0.10	12	102	18	50.8	V-0	130	-	-
				0.20	12	102	70	50.8	V-0	130	-	-
<b>SU1504/ SU1504B</b>	SU1504	SU1504B	No ANSI	0.38	9	102	70	50.8	V-0	90	-	-
<b>SU1603/ SU1603B</b>	SU1603	SU1603B	No ANSI	0.30	9	102	68	50.8	V-0	130	-	-
<b>SU1609/ SU1609B</b>	SU1609	SU1609B	No ANSI	0.10	12	102	70	50.8	V-0	90	-	-
<b>SU1804</b>	SU1804	SU1804B	No ANSI	0.20	12	102	68	50.8	V-0	130	-	-
<b>Synamic9N/ Synamic9NB (ASP 1)</b>												
	Synamic9N	Synamic9NB	No ANSI	0.38	12	102	70	50.8	V-0	50	260	6
<b>Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides, furnished , rolls</b>												
<b>S2130, S2130JB</b>	S2130, S2130JB	S0102, S0103, S0104	CEM-3.0	0.63	17	102	68	50.8	V-0	130	-	-
<b>SU1611/ SU1611B</b>	SU1611	SU1611B	No ANSI	0.38	12	102	70	50.8	V-0	50	-	-

**Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides, furnished / or tubes**

**S1000HS/S1000HSB**

	S1000HS	S1000HSB	FR-4.0	0.38	12	102	68	50.8	V-0	130	-	-
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**S1000M, S1000H, Autolad1 (ASP 1)**

	S1000M, S1000H, Autolad1	S1000MB, S1000HB, Autolad1B	FR-4.0	0.38	12	102	68	50.8	V-0	130	-	-
				0.38	17	102	70	50.8	V-0	130	260	6

**Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides,**

**Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G/Q100CB**

	Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G	Q100CB	FR-4.0	0.38	12	102	70	50.8	V-0	130	-	-
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**S1155GX/S1155GXB**

	S1155GX	S1155GXB	FR-4.1	0.10	12	102	70	50.8	V-0	120	-	-
				0.20	12	102	70	50.8	V-0	130	-	-

**SE80, SDI03, SDI03K, LSDI03K (ASP 1)**

	SE80, SDI03, SDI03K, LSDI03K	SE80B, SDI03B, SDI03KB, LSDI03KB	FR-4.1	0.20	9	102	70	50.8	V-0	130	260	6
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**Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides, furnished**

<b>AeroWave 300</b>	AeroWave 300	-	No ANSI	0.10	12	102	-	50.8	V-0	90	-	-
				0.20	12	102	-	50.8	V-0	100	-	-
				0.38	12	102	-	50.8	V-0	115	-	-
<b>Autolad2</b>	Autolad2	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	-	-

**Q160, PQ160, Q161, Q162**

	Q160	-	FR-4.0	0.20	18	102	-	50.8	V-0	90	-	-
				0.38	18	102	-	50.8	V-0	130	-	-

**Q260, Q260#, PQ260**

	Q260	-	CEM-3.0	0.63	18	102	-	50.8	V-0	130	-	-
<b>Q360, Q360H, Q360G, Q360W</b>												
	Q360, Q360H, Q360G, Q360W	-	CEM-1	0.63	17	102	-	50.8	V-0	130	-	-
<b>S1000</b>	S1000	-	FR-4.0	0.38	15	102	-	50.8	V-0	130	-	-
				0.63	15	102	-	50.8	V-0	130	-	-
				1.60	15	102	-	50.8	V-0	130	-	-
<b>S1000-2, S-2(C)</b>	S1000-2, S-2	-	FR-4.0	0.38	15	102	-	50.8	V-0	130	-	-
				0.63	15	102	-	50.8	V-0	130	-	-
				1.60	15	102	-	50.8	V-0	130	-	-
<b>S1000-2M, Autolad3 (ASP 1)</b>												
	S1000-2M, Autolad3	-	FR-4.0	0.20	12	102	-	50.8	V-0	130	-	-
				0.25	17	102	-	50.8	V-0	130	260	6
<b>S1130</b>	S1130	-	FR-4.0	0.22	17	68	-	50.8	V-0	130	-	-
				0.38	17	68	-	50.8	V-0	130	-	-
				1.40	17	68	-	50.8	V-0	130	-	-
<b>S1135G</b>	S1135G	-	No ANSI	0.20	12	102	-	50.8	V-0	120	-	-
<b>S1141, S1141-4, S1141 150, S1141 170, S1151 (ASP 1)</b>												
	S1141, S1141-4, S1141 150, S1141 170, S1151	-	FR-4.0	0.38	8.5	102	-	50.8	V-0	130	-	-
				0.38	17	102	-	50.8	V-0	130	260	3
<b>S1141KF</b>	S1141KF	-	FR-4.0	0.38	8.5	102	-	50.8	V-0	130	-	-
<b>S1150</b>	S1150	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	-	-
<b>S1150F, S1140F, S1141-4F</b>												
	S1150F, S1140F, S1141-4F	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	-	-

<b>S1151G</b>	S1151G	-	FR-4.1	0.38	12	102	-	50.8	V-0	130	-	-
				0.25	12	102	-	50.8	V-0	110	-	-
<b>S1152G</b>	S1152G	-	FR-4.1	0.10	12	102	-	50.8	V-0	130	-	-
<b>S1165, SI546, S7542K</b>												
	S1165, SI546	-	No ANSI	0.20	9	102	-	50.8	V-0	115	-	-
				0.38	9	102	-	50.8	V-0	130	-	-
<b>S1165G</b>	S1165G	-	FR-4.1	0.38	9	102	-	50.8	V-0	130	-	-
<b>S1170</b>	S1170	-	FR-4.0	0.38	17	102	-	50.8	V-0	130	-	-
<b>S1170F</b>	S1170F	-	FR-4.0	0.20	12	102	-	50.8	V-0	130	-	-
<b>S1170G, S7045GH</b>	S1170G, S7045GH	-	FR-15.1	0.10	12	102	-	50.8	V-0	140	-	-
				0.20	12	102	-	50.8	V-0	150	-	-
<b>S1170M</b>	S1170M	-	FR-4.0	0.20	9	102	-	50.8	V-0	130	-	-
<b>S1180G</b>	S1180G	-	FR-4.1	0.38	9	102	-	50.8	V-0	130	-	-
<b>S1190</b>	S1190	-	FR-4.0	0.09	9	102	-	50.8	V-0	130	-	-
<b>S1190M</b>	S1190M	-	FR-15.0	0.09	9	102	-	50.8	V-0	130	-	-
<b>S1210G</b>	S1210G	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	-	-
<b>S1250G</b>	S1250G	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	-	-
<b>S1440</b>	S1440	-	FR-4.0	0.38	9.0	70	-	50.8	V-0	130	-	-
<b>S1600, S1600M</b>	S1600, S1600M	-	FR-4.0	0.63	17	68	-	50.8	V-0	130	-	-
<b>S1600H</b>	S1600H	-	FR-4.0	0.20	9	102	-	50.8	V-0	130	-	-
<b>S1600L</b>	S1600L	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	-	-
<b>S168GL</b>	S168GL	-	FR-4.1	0.03	12	102	-	50.8	V-0	105	-	-
				0.10	12	102	-	50.8	V-0	120	-	-

				0.20	12	102	-	50.8	V-0	130	-	-
<b>S168GN (ASP 1)</b>	S168GN	-	FR-15.1	0.20	12	102	-	50.8	V-0	130	-	-
				0.20	12	102	-	50.8	V-0	130	260	6
<b>S1860</b>	S1860	-	FR-4.0	0.38	17	105	-	50.8	V-0	130	-	-
<b>S2126, S2135, S2155</b>												
	S2155	-	CEM-3.0	0.63	9.0	105	-	50.8	V-0	130	-	-
<b>S2130, S2130JB</b>	S2130, S2130JB	-	CEM-3.0	0.50	17	102	-	50.8	V-0	130	-	-
<b>S2131, S2131JB</b>	S2131, S2131JB	-	CEM-3.0	0.63	8.5	68	-	50.8	V-0	130	-	-
<b>S2136, ST210</b>	S2136, ST210	-	CEM-3.0	0.63	8.5	68	-	50.8	V-0	130	-	-
<b>S225G (ASP 1)</b>	S225G	-	FR-15.1	0.20	12	102	-	50.8	V-0	130	-	-
				0.20	12	102	-	50.8	V-0	130	260	6
<b>S26, S2600F</b>	S26	-	CEM-3.0	0.63	9	102	-	50.8	V-0	130	-	-
<b>S2600EF (d)</b>	S2600EF	-	CEM-3.0	S2600EF	17	68	-	50.8	V-0	130	-	-
				S2600EF	17	68	-	50.8	V-0	130	-	-
				S2600EF	17	68	-	50.8	V-0	130	-	-
				S2600EF	17	68	-	50.8	V-0	130	-	-
<b>S3110, COB714</b>	S3110, COB714	-	CEM-1	0.63	17	102	-	50.8	V-0	130	-	-
<b>S3116</b>	S3116	-	CEM-1	0.63	17	102	-	50.8	V-0	130	-	-
<b>S3155</b>	S3155	-	No ANSI	0.63	18	68	-	25.4	V-0	90	-	-
<b>S7038, SL7038</b>	S7038, SL7038	-	FR-4.0	0.20	17	102	-	50.8	V-0	120	-	-

				0.38	17	102	-	50.8	V-0	130	-	-
<b>S7040G</b>	S7040G	-	FR-4.1	0.03	12	102	-	50.8	V-0	90	-	-
				0.24	12	102	-	50.8	V-0	120	-	-
				0.38	12	102	-	50.8	V-0	130	-	-
<b>S7040GX</b>	S7040GX	-	FR-4.1	0.24	12	102	-	50.8	V-0	120	-	-
				0.38	12	102	-	50.8	V-0	130	-	-
<b>S7045G (ASP 1)</b>	S7045G	-	FR-4.1	0.10	12	102	-	50.8	V-0	120	-	-
				0.20	12	102	-	50.8	V-0	130	-	-
				0.20	12	102	-	50.8	V-0	130	260	6
<b>S7045GX</b>	S7045GX	-	FR-4.1	0.24	12	102	-	50.8	V-0	120	-	-
				0.38	12	102	-	50.8	V-0	130	-	-
<b>S7641G</b>	S7641G	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	-	-
<b>S7645G</b>	S7645G	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	-	-
<b>S78</b>	S78	-	No ANSI	0.10	12	102	-	50.8	V-0	90	-	-
				0.20	12	102	-	50.8	V-0	100	-	-
				0.38	12	102	-	50.8	V-0	115	-	-
<b>SDI06K</b>	SDI06K	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	-	-
<b>SDI07K</b>	SDI07K	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	-	-
<b>SI05NF</b>	SI05NF	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	-	-
<b>SI07N</b>	SI07N	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	-	-
<b>ST115, ST115D</b>	ST115	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-
<b>ST215, ST210G</b>	ST215, ST210G	-	CEM-3.1	0.50	12	102	-	50.8	V-0	130	-	-
<b>SU1301, S1155K, SL1155K</b>												
	SU1301, S1155K, SL1155K	-	FR-4.1	0.03	12	102	-	50.8	V-0	105	-	-
				0.10	12	102	-	50.8	V-0	120	-	-

				0.20	12	102	-	50.8	V-0	130	-	-
<b>SU1305</b>	SU1305	-	FR-4.1	0.10	12	102	-	50.8	V-0	130	-	-
<b>SU1504</b>	SU1504	-	No ANSI	0.20	9	102	-	50.8	V-0	90	-	-
<b>SU1603</b>	SU1603	-	No ANSI	0.10	9	102	-	50.8	V-0	130	-	-
<b>SU1609</b>	SU1609	-	No ANSI	0.025	9	102	-	50.8	V-0	90	-	-
<b>SU1611</b>	SU1611	-	No ANSI	0.38	12	102	-	50.8	V-0	50	-	-
<b>SU1804</b>	SU1804	-	No ANSI	0.20	12	102	-	50.8	V-0	130	-	-
<b>Synamic9N (ASP 1)</b>												
	Synamic9N	-	No ANSI	0.38	12	102	-	50.8	V-0	50	260	6
<b>Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides, furnishec rolls</b>												
<b>Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G</b>												
	Q100	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-
				0.10	17	102	-	50.8	V-0	90	-	-
<b>Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides, furnishec rods or tubes</b>												
<b>S1000HS</b>	S1000HS	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-
<b>S1000M, S1000H, Autolad1 (ASP 1)</b>												
	S1000M, S1000H, Autolad1	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	-	-
				0.38	17	102	-	50.8	V-0	130	260	6
<b>S2155G</b>	S2155	-	CEM-3.1	0.50	12	102	-	50.8	V-0	130	-	-
<b>Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides,</b>												
<b>Q310</b>	Q310	-	CEM-1	0.63	17	102	-	50.8	V-0	130	-	-
<b>S1155GX</b>	S1155GX	-	FR-4.1	0.03	12	102	-	50.8	V-0	105	-	-
				0.10	12	102	-	50.8	V-0	120	-	-
				0.20	12	102	-	50.8	V-0	130	-	-

SE80, SDI03, SDI03K, LSDI03K (ASP 1)													
	SE80, SDI03, SDI03K, LSDI03K	-		FR- 4.1	0.20	9	102	-	50.8	V-0	130	260	6

**Metal clad metal base industrial laminates:**

		Metal		Dielectric		Clad Cond Thk		Max		Max		Assembly Solder		Solder Lts		
Metal Clad Dsg	Lam- inate Dsg	Pre- preg Dsg	Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Oper Temp (°C)	Process Temp (°C)	Process Cycles	Temp (°C)	Time (sec)
<b>Aluminum base With Epoxy (EP) dielectric, Metal clad industrial laminates With copper On one Or both sides,</b>																
<b>SAR20LM, SAR25H, STR20 (k)</b>																
	SAR20LM, SAR25H, STR20	-	0.30		35	150	12	102	-	50.8	V-0	150	-	-	300	60
<b>Aluminum base With Epoxy (EP) and Phenolic dielectric, Metal clad industrial laminates With copper On one Or both sides, furnished As sheets or rolls</b>																
<b>SAR15, SAR20, SAR20H, SAR30, STR15(e)</b>																
	SAR15, SAR20, SAR20H, SAR30, STR15(e)	-	0.30		50	150	17	102	-	50.8	V-0	130	-	-	300	60
<b>Anodized Aluminum base With Epoxy (EP) with glass fabric dielectric, Metal clad industrial laminates With copper On one Or both sides, furnished As sheets or rolls</b>																
<b>SA115, SA120</b>	SA115, SA120	-	0.30		70	200	12	140	-	50.8	V-0	90	-	-	300	60

**Metal clad films:**

		Film		Adhesive		Clad Cond Thk		Max		Max		Assembly Solder		Solder Lts		
Metal Clad Dsg	Lam- inate Dsg	Pre- preg Dsg	Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Oper Temp (°C)	Process Temp (°C)	Process Cycles	Temp (°C)	Time (sec)
<b>Polyimide (PI) (Adhesiveless) Metal clad films For use In Single layer printed wiring boards With copper required On both sides, furnished As sheets or rolls</b>																
<b>DL</b>	DL	-	0.009	0.050	-	-	9	70	-	50.8	VTM-0	130	-	-	288	10
<b>Polyimide (PI) (Adhesiveless) Metal clad films For use In Single layer printed wiring boards With copper On one side only, furnished As sheets or rolls</b>																
<b>SL</b>	SL	-	0.009	0.050	-	-	9	70	-	50.8	VTM-0	130	-	-	288	10



**Metal clad metal base industrial laminates:**

Metal Clad Dsg	Lam-inate Dsg	Pre-preg Dsg	Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Max Oper Temp (°C)	Assembly Process Temp(°C)	Solder Process Cycles	Solder Temp (°C)	Solder Time (sec)
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**Aluminum or Copper base With Epoxy (EP) dielectric, Metal clad industrial laminates With copper On one side only, furnished As sheets**

**SAR20L, SCR20L, STR20L (j)**

	SAR20L, SCR20L, STR20L	-	0.30		50	150	12	102	-	50.8	V-0	90	-	-	288	60
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**Anodized Aluminum base With Epoxy (EP) blend dielectric, Metal clad industrial laminates With copper On one side only, furnished As sheets**

**SAR10S, SAR15S, SAR20S, SAR30S**

	SAR10S, SAR15S, SAR20S, SAR30S	-	0.30		50	150	18	102	-	50.8	V-0	130	-	-	300	60
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**Copper base With Epoxy (EP) blend dielectric, Metal clad industrial laminates With copper On one side only, furnished As sheets**

**SCR10S, SCR15S, SCR20S, SCR30S**

	SCR10S, SCR15S, SCR20S, SCR30S	-	0.45		50	150	18	102	-	50.8	V-0	130	-	-	300	60
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**Iron base With Epoxy (EP) blend dielectric, Metal clad industrial laminates With copper On one side only, furnished As sheets**

**SFR10S, SFR15S, SFR20S, SFR30S**

	SFR10S, SFR15S, SFR20S, SFR30S	-	0.45		55	150	18	102	-	50.8	V-0	130	-	-	300	60
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**Metal clad industrial laminates:**

Metal Clad Dsg	Lam-inate Dsg	Pre-preg Dsg	ANSI Type	Min Thk (mm)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Max Oper Temp (°C)	Assembly Process Temp(°C)	Solder Process Cycles	Solder Temp (°C)	Solder Time (sec)
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**Epoxy (EP) Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides, furnished As sheets**

<b>S1155 600</b>	S1155 600	S0155 600	No ANSI	0.63	9	102	70	50.8	V-0	90	-	-	288	20
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<b>Epoxy (EP) Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets</b>														
<b>S1155 600</b>	S1155 600	-	No ANSI	0.63	9	102	-	50.8	V-0	90	-	-	288	20
<b>Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides, furnished As sheets</b>														
<b>S1145, S1150G, S1125, SI055W (ASP 1)</b>														
	S1145, S1150G, S1125, SI055W	S1145B, S1150GB, S1125B, SI055WB	FR-4.1	0.10	12	102	68	50.8	V-0	130	-	-	288	20
				0.20	12	102	70	50.8	V-0	130	260	6	300	10
<b>S7035, AeroWave 360</b>														
	S7035, AeroWave 360	S7035B, AeroBond 360	FR-4.0	0.20	17	102	68	50.8	V-0	120	-	-	288	20
				0.38	17	102	68	50.8	V-0	130	-	-	288	20
<b>S7036</b>	S7036	S7036B	FR-4.0	0.20	17	102	68	50.8	V-0	120	-	-	288	20
				0.38	17	102	68	50.8	V-0	130	-	-	288	20
<b>S7038V</b>	S7038V	S7038VB	FR-4.0	0.20	17	102	68	50.8	V-0	120	-	-	288	20
				0.38	17	102	68	50.8	V-0	130	-	-	288	20
<b>Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets</b>														
<b>S1145, S1150G, S1125, SI055W (ASP 1)</b>														
	S1145, S1150G, S1125, SI055W	-	FR-4.1	0.10	12	102	-	50.8	V-0	130	-	-	288	20
				0.20	12	102	-	50.8	V-0	130	260	6	300	10
<b>S7035, AeroWave 360</b>														
	S7035, AeroWave 360	-	FR-4.0	0.20	17	102	-	50.8	V-0	120	-	-	288	20
				0.38	17	102	-	50.8	V-0	130	-	-	288	20
<b>S7036</b>	S7036	-	FR-4.0	0.20	17	102	-	50.8	V-0	120	-	-	288	20
				0.38	17	102	-	50.8	V-0	130	-	-	288	20
<b>S7038V</b>	S7038V	-	FR-4.0	0.20	17	102	-	50.8	V-0	120	-	-	288	20

				0.38	17	102	-	50.8	V-0	130	-	-	288	20
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**Metal clad industrial laminates (Flammability Only Recognition):**

Metal Clad Dsg	Lam-inate Dsg	Pre-peg Dsg	Bld up	ANSI Type	Min Thk (mm)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Max Area Dia (mm)	Clad Cond	Thk	Max Flame Class	Max Oper Temp (°C)	Assembly Process Temp(°C)	Solder Process Cycles	Sold Temp (°C)
<b>Copolymer Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides furnished As sheets</b>																
<b>S7136H/S7136HB</b>	S7136H	S7136HB		No ANSI	0.38	-	-	-	-	V-0	-	-	-	-	-	288
<b>SU1402/SU1402B</b>	SU1402	SU1402B		No ANSI	0.38	-	-	-	-	V-0	-	-	-	-	-	288
<b>Copolymer Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both side furnished As sheets</b>																
<b>S7136H</b>	S7136H	-		No ANSI	0.38	-	-	-	-	V-0	-	-	-	-	-	288
<b>SU1402</b>	SU1402	-		No ANSI	0.38	-	-	-	-	V-0	-	-	-	-	-	288
<b>Epoxy Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets</b>																
<b>ST220P</b>	ST220P	-		No ANSI	0.50	-	-	-	-	V-0	-	-	-	-	-	288
<b>Epoxy (EP) Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both side furnished As sheets</b>																
<b>S1135, S7546</b>	S1135, S7546	-		No ANSI	0.05	-	-	-	-	V-0	-	-	-	-	-	288
<b>S1155M</b>	S1155M	-		No ANSI	0.03	-	-	-	-	V-0	-	-	-	-	-	288
<b>SB170G</b>	SB170G	-		No ANSI	0.05	-	-	-	-	V-0	-	-	-	-	-	288
<b>Epoxy blend Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both side furnished As sheets</b>																
<b>S5W, S1455W</b>	S5W, S1455W	-		No ANSI	0.20	-	-	-	-	HB	-	-	-	-	-	288
<b>Epoxy blend Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both side furnished As sheets or rolls</b>																
<b>SU1610(h)</b>	SU1610(h)	-		No ANSI	0.10	-	-	-	-	HB	-	-	-	-	-	288
<b>Modified Polyimide Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides,</b>																
<b>SH260, SH260M/SH260B</b>																

	SH260, SH260M	SH260B	No ANSI	0.20	-	-	-	-	HB	-	-	-	288
<b>Polybutadiene/polystyrene copolymer Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides, furnished As sheets, rods or tubes</b>													
<b>S7136</b>	S7136	-	No ANSI	0.16	-	-	-	-	V-0	-	-	-	288
<b>Polyimide Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides furnished As sheets</b>													
<b>SH260, SH260M</b>	SH260, SH260M	-	No ANSI	0.08	-	-	-	-	HB	-	-	-	280
<b>Polyimide blend Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides, furnished As sheets</b>													
<b>S1220, S7643</b>	S1220, S7643	S1220B, S7643B	No ANSI	0.20	-	-	-	-	V-0	-	-	-	280
				0.38	-	-	-	-	V-0	-	-	-	280
				0.63	-	-	-	-	V-0	-	-	-	280
				1.60	-	-	-	-	V-0	-	-	-	280
<b>SI64X, SI643, SI643U, SI643HU</b>													
	SI64X, SI643, SI643U, SI643HU	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	No ANSI	0.20	-	-	-	-	V-0	-	-	-	280
				0.38	-	-	-	-	V-0	-	-	-	280
				0.63	-	-	-	-	V-0	-	-	-	280
				1.60	-	-	-	-	V-0	-	-	-	280
<b>Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides, furnished / sheets</b>													
<b>S1151G</b>	S1151G	S1151GB	FR- 4.1	0.20	-	-	-	-	V-0	-	-	-	288
<b>S25</b>	S25	S25B	No ANSI	0.20	-	-	-	-	V-0	-	-	-	288
<b>ST115, ST115D</b>	ST115, ST115D	ST115B, ST115DB	FR- 4.0	0.20	-	-	-	-	V-0	-	-	-	288
<b>Metal clad industrial laminates For use In multilayer printed wiring boards With copper On one Or both sides, furnished / sheets or rolls</b>													
<b>SU1611/ SU1611B</b>	SU1611	SU1611B	No ANSI	0.20	-	-	-	-	V-0	-	-	-	288
<b>Metal clad industrial laminates For use In Single layer printed wiring boards With copper On one Or both sides, furnished sheets</b>													
<b>S1151G</b>	S1151G	-	FR- 4.1	0.05	-	-	-	-	V-0	-	-	-	288

<b>S1152G</b>	S1152G	-	FR-4.1	0.05	-	-	-	-	-	V-0	-	-	-	288
<b>S1165, SI546, S7542K</b>														
	S1165, SI546, S7542K	-	No ANSI	0.05	-	-	-	-	-	V-0	-	-	-	300
<b>S1170G, S7045GH</b>	S1170G, S7045GH	-	FR-15.1	0.03	-	-	-	-	-	V-0	-	-	-	288
<b>S1170M</b>	S1170M	-	FR-4.0	0.06	-	-	-	-	-	V-0	-	-	-	288
<b>S25</b>	S25	-	No ANSI	0.20	-	-	-	-	-	V-0	-	-	-	288
<b>S7438</b>	S7438	-	No ANSI	0.10	-	-	-	-	-	V-0	-	-	-	288
<b>SB120</b>	SB120	-	No ANSI	0.05	-	-	-	-	-	V-0	-	-	-	288
<b>ST115, ST115D</b>	ST115, ST115D	-	FR-4.0	0.20	-	-	-	-	-	V-0	-	-	-	288
<b>SU1305</b>	SU1305	-	FR-4.1	0.03	-	-	-	-	-	V-0	-	-	-	288
<b>SU1611</b>	SU1611	-	No ANSI	0.20	-	-	-	-	-	V-0	-	-	-	288

**Metal clad metal base industrial laminates (Flammability Only Recognition):**

		Metal		Dielectric		Clad Cond Thk			Max	Max	Assembly Solder	Solder	Lts			
Metal Clad Dsg	Lam-inate Dsg	Pre-preg Dsg	Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Oper Temp (°C)	Process Temp(°C)	Process Cycles	Temp (°C)	Time (sec)
<b>Aluminum base With Epoxy (EP) and Phenolic dielectric, Metal clad industrial laminates With copper On one side only, furnished As sheets or rolls</b>																
<b>SA110L</b>	SA110L	-	0.30		70	200	-	-	-	-	V-0	-	-	-	288	20

**Bonding film unsupported (Freefilms):**

Mtl Dsg	Color	Min Thk (mic)	Max Thk (mic)	Flame Class
<b>Bonding film unsupported (Freefilms) for use in printed wiring boards, furnished as sheets</b>				
<b>SF206B</b>	NC	10	50	-
<b>SF315B</b>	NC	10	50	-

**Coverlay:**

**Film**

**Adhesive**

Mtl Dsg	Color	Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Flame Class
<b>Polyamide-imide film with Epoxy (EP) adhesive Coverlays for use in flexible printed wiring boards, furnished as sheets or rolls</b>						
SF215C	BK	0.003	0.007	5	30	VTM-0
<b>Polyimide (PI) film with Epoxy (EP) adhesive Coverlays for use in flexible printed wiring boards, furnished as sheets or rolls</b>						
SF202C	NC	0.0075	0.012	5	50	VTM-0
	NC	0.0125	0.050	12.5	50	V-0
SF303C (Note2)	WT	0.0205	0.075	15	50	V-0
SF305C	NC	0.0075	0.012	5	50	VTM-0
	NC	0.0125	0.050	12.5	50	V-0
SF315C	NC (BK)	0.0075	0.012	5	50	VTM-0
	NC (BK)	0.0125	0.050	12.5	50	V-0
SF325C	NC	0.0125	0.025	12.5	35	V-0
SF335C	NC	0.0075	0.0124	5	15	VTM-0
	NC	0.0125	0.050	12.5	50	V-0
<b>Polyimide (PI) film with Epoxy (EP) and nitrile adhesive Coverlays for use in flexible printed wiring boards, furnished as sheets or rolls</b>						
SF345C	BK	0.0055	0.050	5	19	VTM-0
	BK	0.0055	0.050	19.5	60	V-0
<b>with adhesive Coverlays for use in flexible printed wiring boards, furnished as sheets</b>						
SF206C	NC	0.0125	0.024	10	50	VTM-0
	NC	0.025	0.050	10	50	V-0
SF302C	NC	0.0125	0.025	12.5	35	V-0

**Investigated flex package combinations:**

Category	Grade	Film		Adhesive		Copper	
		Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Thk (mic)	Max Thk (mic)
<b>SF202/SF315C</b>							
Flame Class: V-0; Max Oper Temp (°C): 130; Solder Limit Temp (°C): 300; Solder Limit Time (sec): 10							
Base film	SF202	0.0125	0.050	-	-	6	70
Coverlay	SF315C	0.0075	0.05	5	50	-	-
<b>SF202/SF325C</b>							
Flame Class: V-0; Max Oper Temp (°C): 130; Solder Limit Temp (°C): 300; Solder Limit Time (sec): 10							

Base film	SF202	0.0125	0.050	-	-	6	70
Coverlay	SF325C	0.0125	0.025	12.5	35	-	-
<b>SF212/SF202C</b>							
Flame Class: V-0; Max Oper Temp (°C): 150; Solder Limit Temp (°C): 300; Solder Limit Time (sec): 10							
Base film	SF212	0.0125	0.0125	-	-	6	70
Base film	SF212	0.020	0.020	-	-	6	70
Base film	SF212	0.025	0.025	-	-	6	70
Base film	SF212	0.050	0.050	-	-	6	70
Coverlay	SF202C	0.0075	0.05	5	50	-	-
<b>SF212/SF315C</b>							
Flame Class: V-0; Solder Limit Temp (°C): 300; Solder Limit Time (sec): 10							
Base film	SF212	0.0125	0.0125	-	-	-	-
Base film	SF212	0.020	0.020	-	-	-	-
Base film	SF212	0.025	0.025	-	-	-	-
Base film	SF212	0.050	0.050	-	-	-	-
Coverlay	SF315C	0.0075	0.05	5	50	-	-
<b>SF305/SF305C</b>							
Flame Class: V-0; Max Oper Temp (°C): 130; Solder Limit Temp (°C): 288; Solder Limit Time (sec): 10							
Base film	SF305	0.0125	0.050	10	25	12	102
Coverlay	SF305C	0.0075	0.050	5	50	-	-

# - # will be replaced by one letter A~Z.

\$ - Multilayer Recognition shall start from minimum thickness of 0.63mm

(ASP 1) - Assembly solder process evaluated to IPC-TM-650, 2.6.27 Thermal Stress Assembly Simulation.

(C) - Identical to the S1000 family.

(d) - Alternate solder limits: 6 cycles max.: 25-183C @ 2C/sec.; 183-260-183C @ 1.3C/sec. (120 sec. total); 183-25C @ 3C/sec.

(e) - STR15 is shipped as a B-stage insulation sheet [Resin coated copper (RCC) foil] without being adhered to a metal substrate. PWB manufacturer must adhere to Aluminum metal base as specified, within thickness range Recognized.


(h) - Thickness is 0.10 mm ONLY

(i) - Employs the same dielectric as SAR10S family

(j) - Alternate Shipping Form : SAR20L is Aluminum metal based laminate; SCR20L is Copper metal based laminate; STR20L is B-stage insulation sheet with copper and without being adhered to a metal substrate, PWB manufacturer must adhere to Aluminum or Copper base metal as specified, within thickness range Recognized.

(k) - Alternate Shipping Form : SAR20LM is single sided copper cladding Aluminum metal based laminate; SAR25H is double sided copper cladding Aluminum metal based laminate; STR20 is B-stage insulation sheet with copper cladding and without being adhered to a metal substrate, PWB manufacturer must adhere to Aluminum base metal as specified, within thickness range Recognized.

Note 1 - thickness is limited to 0.20 mm maximum

Marking: Company name or trademark  and model designation.

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