RISHO

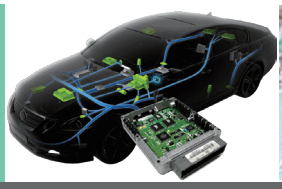
"TO THE ONLY ONE"

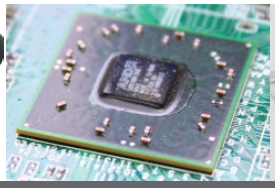
Leading-Edge PCB Material Technology

CS-3356S

Halogen Free and Low CTE CCL and Prepreg

RoHS COMPLIANT





Lead-Free Application | ECU | IC Package | Component Substrate

Features and Benefits:

- Halogen Free / Antimony Free / Red Phosphorous Free
- High Elasticity
- Excellent in Anti-Migration Property
- Suitable for Lead Free Soldering Process

Test Item / Test Method		Unit	Condition	Typical Value
Insulation Resistance	Normal	MΩ	C-96/20/65	9×10^8
	After		C-96/20/65	5×10^7
Volume Resistance	Normal	MΩm	C-96/20/65	5×10^7
	After		C-96/20/65	1×10^7
Surface Resistance	Normal	MΩ	C-96/20/65	4×10^8
	After		C-96/20/65	1×10^8
Dielectric Constant (Dk)	@1MHz	—	C-96/20/65	4.4
	@1GHz			4.6
Loss Tangent (Df)	@1MHz	—	C-96/20/65	0.012
	@1GHz			0.012
Solder Heat Resistance	260ºC	Sec	A	> 300
	288ºC			> 300
	300ºC			> 300
Flexural Strength	X-axis	MPa	A	610
	Y-axis			450
Flexural Modulus (25ºC)	X-axis	GPa	A	31
	Y-axis			28
Flexural Modulus (200ºC)	X-axis		200ºC	17
	Y-axis			15
Water Absorption		%	E-24/50	0.09
			E-24/50	0.24
Peel Strength (1/2 oz copper)		kN/m	A	1.5
Peel Strength of Inner Layer Copper		kN/m	A	0.64
Tg (DMA)		ºC	A	180
Poisson's Ratio		-	A	0.15
Thermal Conductivity		W/mK	A	0.9
Barcol Hardness		-	20ºC	76
			200ºC	48
Thermal Expansion		%	A	2.3
CTE	X (α1)	ppm/ºC	A	12
	Y (α1)		A	13
	Z (α1)		A	27
	Z (α2)		A	160
Chemical Resistance		10% H2SO 430ºC		No Damage
		25% HCl 30ºC 60min		No Damage
		5% NaOH 50ºC		No Damage
Flammability		-	UL 94	V-0

Product	Cu (um)	Dielectric (mm)
CCL (CS-3356S)	12 / 18 / 35	0.06 / 0.1 / 0.15 / 0.2 / 0.3 / 0.4 / 0.5 / 0.6 / 0.8 / 1.0 / 1.2 / 1.6
Prepreg (ES-3306S)	-	0.06 / 0.1 / 0.2

www.risho.co.jp/english/

TechDream

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