

**CSCD52H THRU CSCD510H**

● **FEATURES**

- \* Halogen-free type
- \* Lead free product, compliance to RoHS
- \* Lead less chip form, no lead damage
- \* Lead-free solder joint, no wire bond & lead frame
- \* Low power loss, High efficiency
- \* High current capability, low VF
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

● **APPLICATION**

- \* Switching mode power supply applications
- \* Portable equipment battery applications
- \* High frequency rectification
- \* DC / DC Converter
- \* Telecommunication

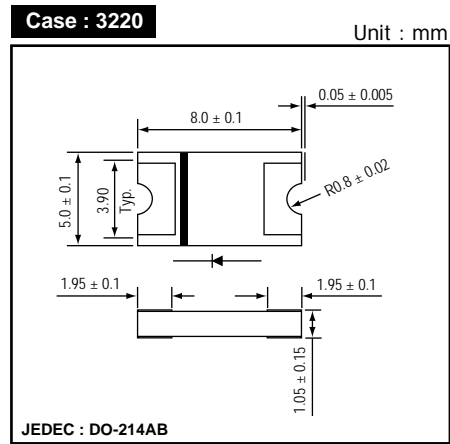
● **MECHANICAL DATA**

**Case :** Packed with FRP substrate and epoxy underfilled  
**Terminals :** Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.  
**Polarity :** Laser Cathode band marking  
**Weight :** 0.093 gram

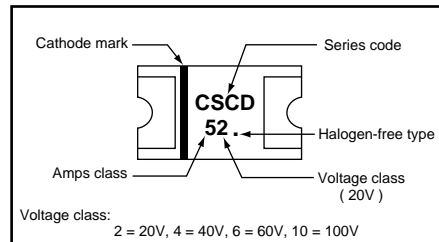
● **PACKING**

- \* 3,000 pieces per 13" (330mm ± 2mm) reel
- \* 1 reels per box
- \* 5 boxes per carton

● **OUTLINE DIMENSIONS**



● **MARKING**



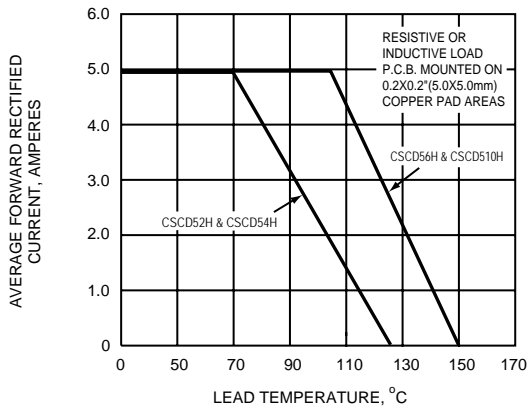
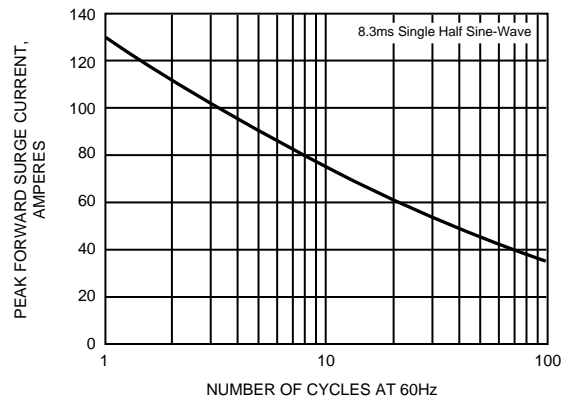
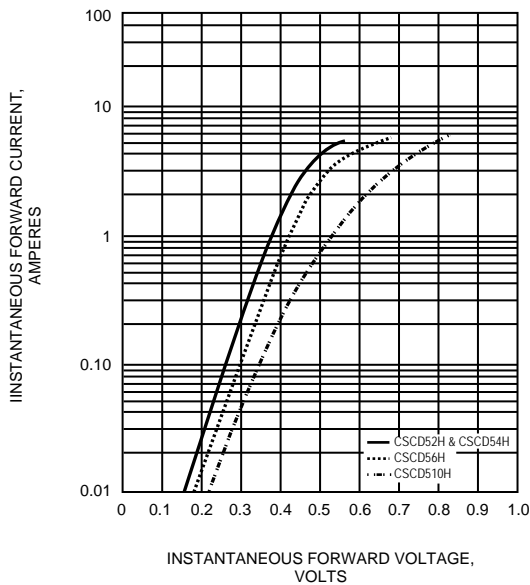
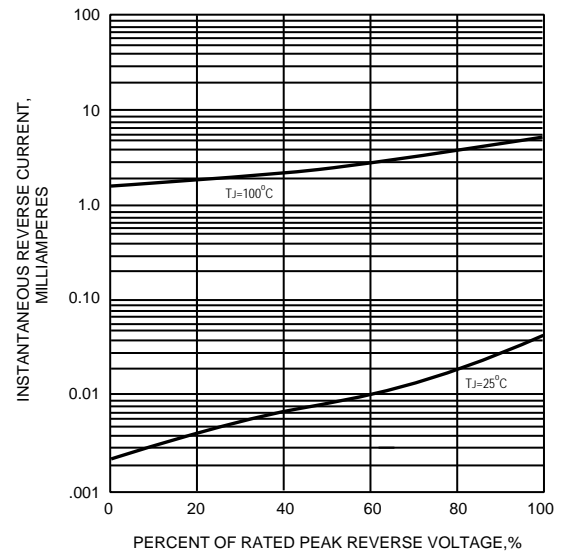
**Absolute Maximum Ratings (Ta = 25 °C)**

ITEM	Symbol	Conditions	CSCD				Unit
			52H	54H	56H	510H	
Repetitive peak reverse voltage	VRRM		20	40	60	100	V
Average forward current (SEE FIG.1)	IF(AV)		5.0				A
Peak forward surge current	IFSM	8.3ms single half sine-wave	130				A
Operating junction temperature Range	Tj		-55 to +125		-55 to +150		°C
Storage temperature Range	TSTG		-55 to +150				°C

**Electrical characteristics (Ta = 25 °C)**

ITEM	Symbol	Conditions	Type	Min.	Typ.	Max.	Unit	
Forward voltage (NOTE 1)	VF	IF = 1 A	CSCD52H	-	0.38	-	V	
		IF = 3 A	/	-	0.45	-		
		IF = 5 A	CSCD54H	-	0.52	0.55		
		VF	IF = 1 A	CSCD56H	-	0.42	-	V
			IF = 3 A		-	0.52	-	
			IF = 5 A		-	0.65	0.70	
	VF	IF = 1 A	CSCD510H	-	0.53	-	V	
		IF = 3 A		-	0.69	-		
		IF = 5 A		-	0.79	0.85		
Repetitive peak reverse current	IRRM	VR = Max. VRRM , Ta = 25 °C		-	0.045	0.50	mA	
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz		-	180	-	pF	
Thermal resistance	Rth(JA)	Junction to ambient (NOTE 2)		-	55	-	°C/W	
	Rth(JL)	Junction to lead (NOTE 2)		-	17	-	°C/W	

NOTES : (1) Pulse test width PW=300usec , 1% duty cycle.  
 (2) Mounted on P.C. board with 0.2 x 0.2"(5.0 x5.0mm) copper pad areas.  
 (3) Preliminary draft.

**FIG.1 - FORWARD CURRENT DERATING CURVE**

**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

**FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

**FIG.5 - TYPICAL JUNCTION CAPACITANCE**
