5.0Amp. Surface Mount Schottky Barrier Diodes

CSMC520-5100SC Series

Features

- For surface mounted applications.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-0
- Low leakage current
- High surge capability
- High temperature soldering: 250°C/10 seconds at terminals
- Exceeds environmental standards of MIL-S-19500/228

Mechanical Data

- Case: Molded plastic, SMC/JEDEC DO-214AB.
- Terminals: Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight: 0.195 gram, 0.00585 ounce

Maximum Ratings and Electrical Characteristics

(Rating at 25°C ambient temperature unless otherwise specified.)

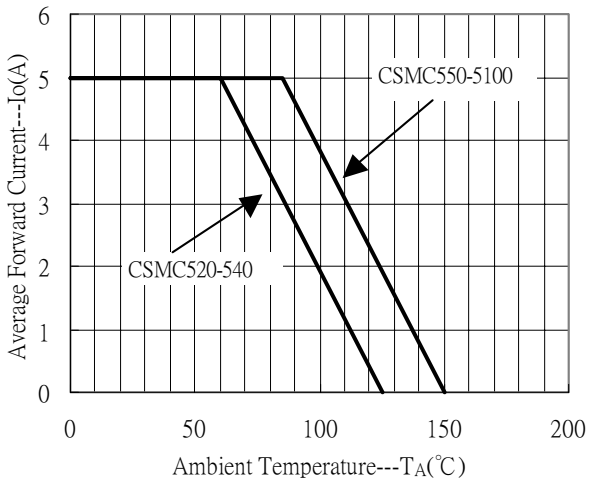
Parameter	Symbol	Type							Units
		CSMC 520	CSMC 530	CSMC 540	CSMC 550	CSMC 560	CSMC 580	CSMC 5100	
Repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	V_R	20	30	40	50	60	80	100	V
Maximum instantaneous forward voltage, I_F=5A (Note 1)	V_F	0.55	0.55	0.55	0.7	0.7	0.85	0.85	V
Average forward rectified current	I_O	5							A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	150							A
Maximum DC reverse current $V_R=V_{RRM}, T_A$=25℃ (Note 1) $V_R=V_{RRM}, T_A$=125℃ (Note 1)	I_R	0.5 50							mA mA
Maximum thermal resistance, Junction to ambient(Note 2)	$R_{th,JA}$	55 (typ)							℃/W
Diode junction capacitance @ f=1MHz and applied 4VDC reverse voltage	C_J	380(typ)							pF
Storage temperature	Tstg	-55 ~ +150							℃
Operating temperature	T_J	-55 ~ +125			-55 ~ +150				℃

Notes : 1.Pulse test, pulse width=300 μ sec, 2% duty cycle

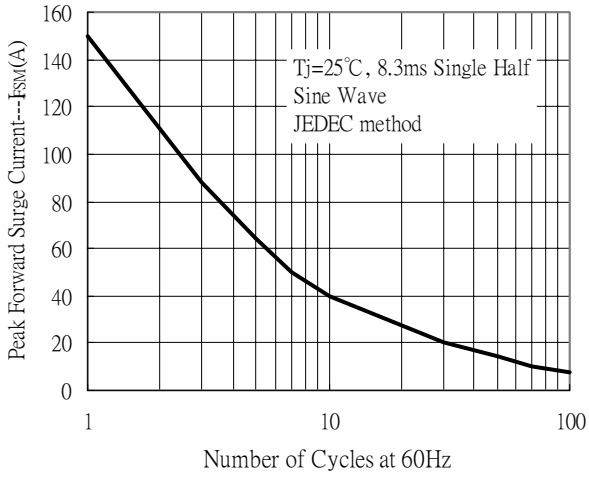
2 .Mounted on PCB with 30mm² (0.013mm thickness) copper pad area.

Characteristic Curves

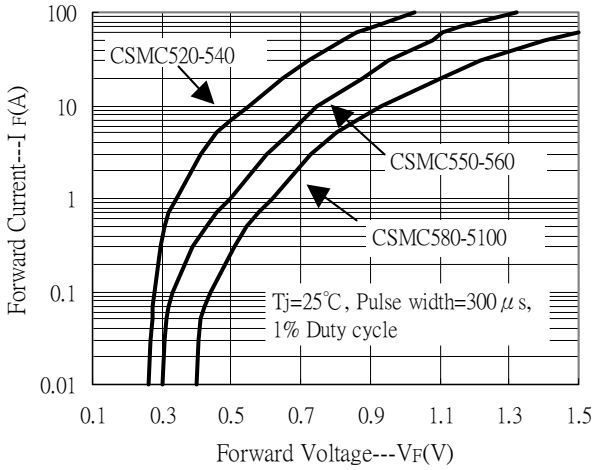
Forward Current Derating Curve



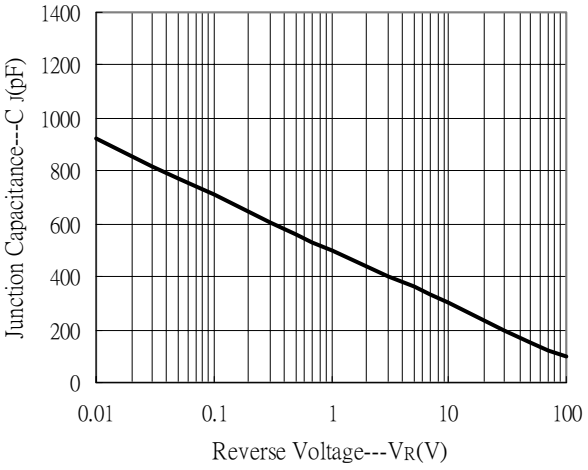
Maximum Non-Repetitive Forward Surge Current



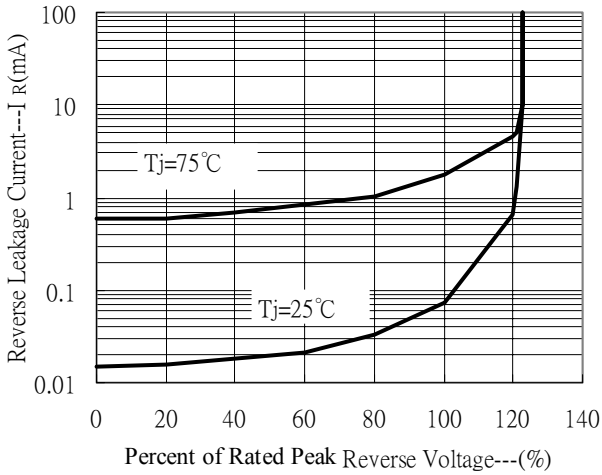
Forward Current vs Forward Voltage



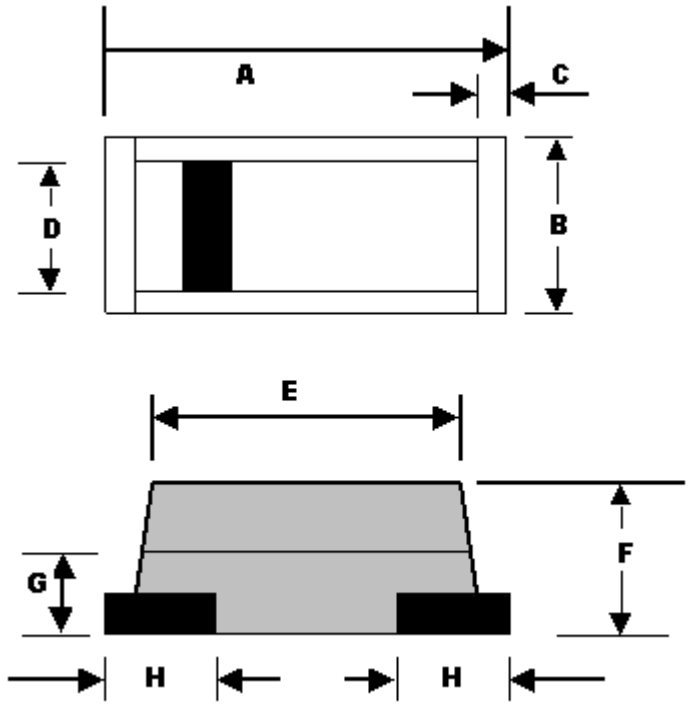
Junction Capacitance vs Reverse Voltage



Reverse Leakage Current vs Reverse Voltage



SMC/DO-214AB Dimension



Marking Code:

Device	CSMC 520	CSMC 530	CSMC 540	CSMC 550
Code	SS52	SS53	SS54	SS55

Device	CSMC 560	CSMC 580	CSMC 5100	
Code	SS56	SS58	S510	

SMC/DO-214AB Plastic
Surface Mounted Package
CYStek Package Code:SC

*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.260	0.276	6.6	7.0	E	0.228	0.244	5.8	6.2
B	0.173	0.189	4.4	4.8	F	0.071	0.087	1.8	2.2
C	0.012(typ)		0.3(typ)		G	0.032(typ)		0.8(typ)	
D	0.144	0.152	3.6	3.8	H	0.04(typ)		1.0(typ)	

Notes : 1.Controlling dimension : millimeters.
2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material :

- Lead : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0

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