3.0Amp. Surface Mount Rectifier

CSMC30XSC Series

Features

- For surface mounted applications.
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- 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.)

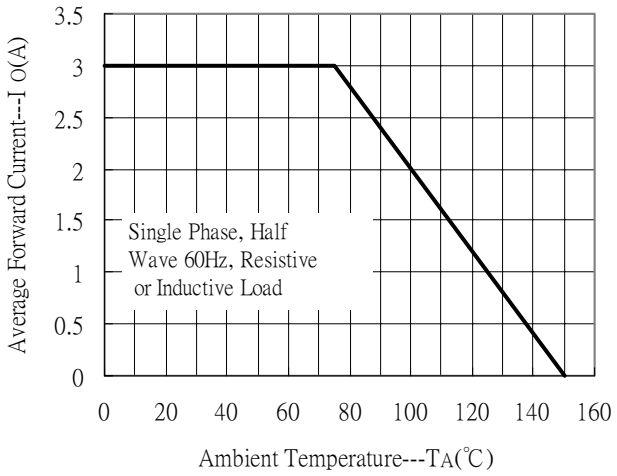
Parameter	Symbol	Type							Units
		CSMC 301	CSMC 302	CSMC 303	CSMC 304	CSMC 305	CSMC 306	CSMC 307	
Repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_R	50	100	200	400	600	800	1000	V
Maximum instantaneous forward voltage, I_F=3A (Note 1)	V_F	1.1							V
Average forward rectified current	I_O	3							A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	100							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	5 250							μA μA
Maximum thermal resistance, Junction to ambient(Note 2)	$R_{th,JA}$	47 (typ)							℃/W
Diode junction capacitance @ f=1MHz and applied 4VDC reverse voltage	C_J	40(typ)							pF
Storage temperature	Tstg	-55 ~ +150							℃
Operating temperature	T_J	-55 ~ +150							℃

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

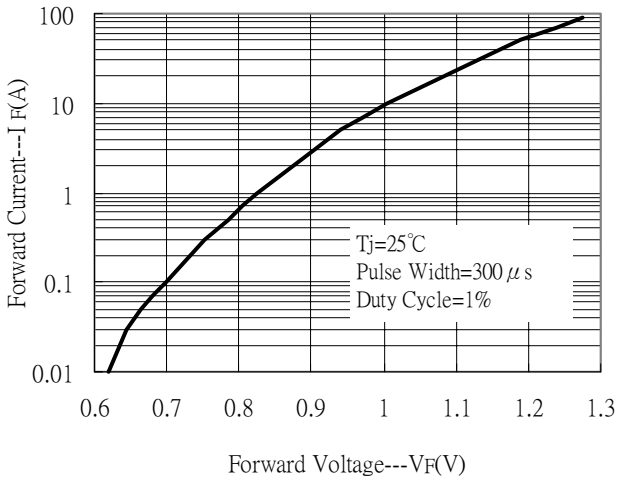
2 .Mounted on PCB with 30mm² (0.013mm thickness) copper pad area.

Characteristic Curves

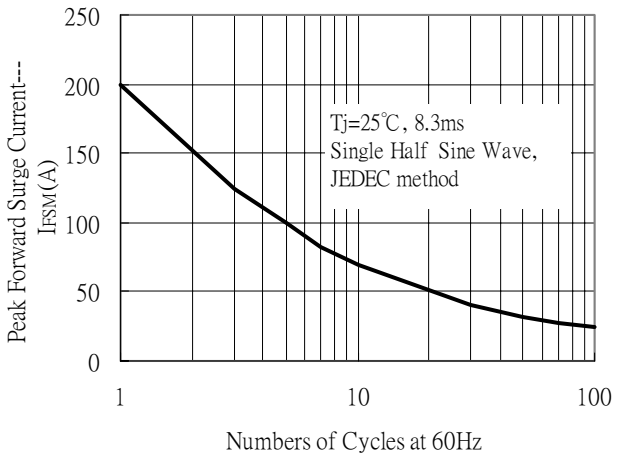
Forward Current Derating Curve



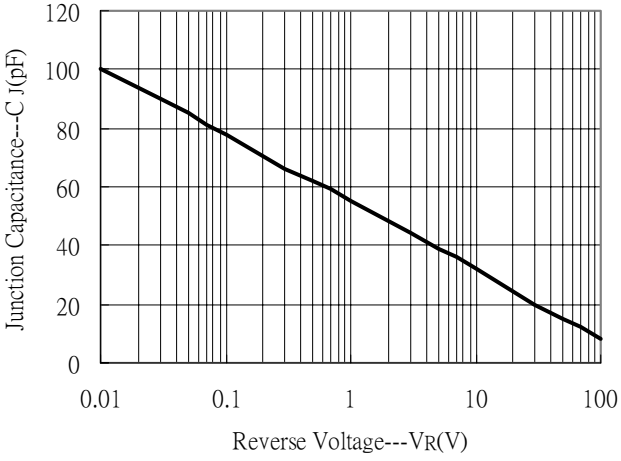
Forward Current vs Forward Voltage



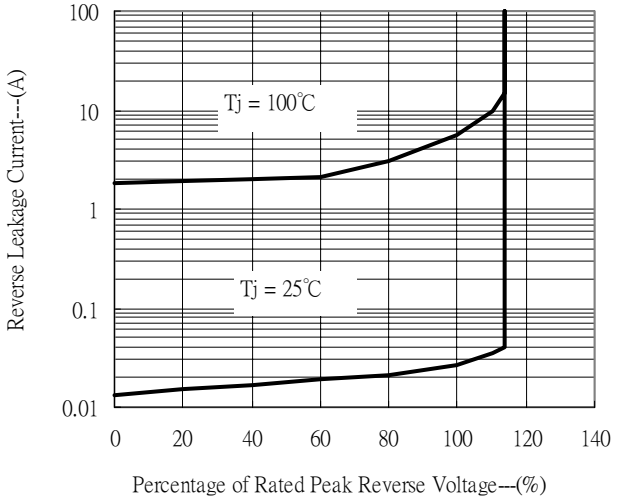
Maximum Non-Repetitive Forward
Surge Current



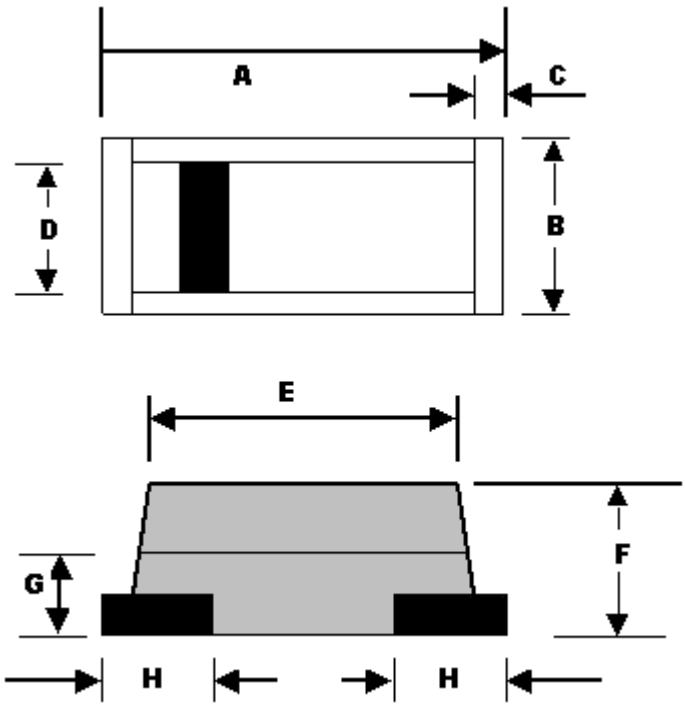
Junction Capacitance vs Reverse Voltage



Reverse Leakage Current vs Reverse Voltage



SMC/DO-214AB Dimension



Marking Code:

Device	CSMC 301	CSMC 302	CSMC 303	CSMC 304
Code	A31	A32	A33	A34

Device	CSMC 305	CSMC 306	CSMC 307	
Code	A35	A36	A37	

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