

CYStech Electronics Corp.

Spec. No.: C344SC com Issued Date: 2003.10.29

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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.)

		Туре							
Parameter	Symbol	CSMC	CSMC	CSMC	CSMC	CSMC	CSMC	CSMC	Units
		301	302	303	304	305	306	307	
Repetitive peak reverse voltage	Vrrm	50	100	200	400	600	800	1000	V
Maximum RMS voltage	Vrms	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, IF=3A (Note 1)	VF	1.1							V
Average forward rectified current	Io	3							A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	Ifsm	м 100							A
Maximum DC reverse current $V_R = V_{RRM}, T_A = 25 ^{\circ} \text{C (Note 1)}$ $V_R = V_{RRM}, T_A = 125 ^{\circ} \text{C (Note 1)}$	I_R	5 250							μΑ μΑ
Maximum thermal resistance, Junction to ambient(Note 2)	R _{th,} JA	47 (typ)						°C/W	
Diode junction capacitance @ f=1MHz and applied 4VDC reverse voltage	CJ	40(typ)						pF	
Storage temperature	Tstg	-55 ∼ +150						$^{\circ}\!\mathbb{C}$	
Operating temperature	ТЈ	- 55 ∼ +150						$^{\circ}\!\mathbb{C}$	

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

2 . Mounted on PCB with $30 \mbox{mm}^2$ (0.013 \mbox{mm thickness}) copper pad area.

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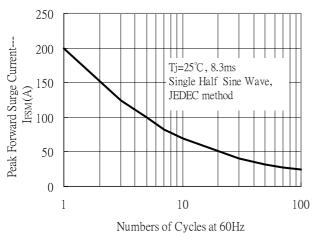
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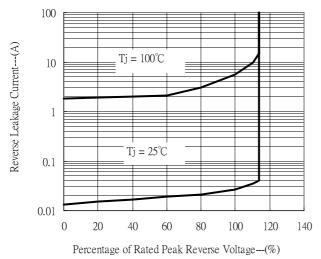
Characteristic Curves

Forward Current Derating Curve 3.5 Average Forward Current---I O(A) 3 2.5 2 1.5 Single Phase, Half Wave 60Hz, Resistive 1 or Inductive Load 0.5 0 0 80 20 40 60 100 120 140 160 Ambient Temperature--- $TA(^{\circ}C)$

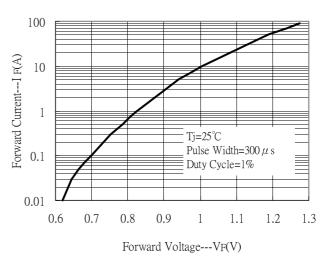
Maximum Non-Repetitive Forward
Surge Current



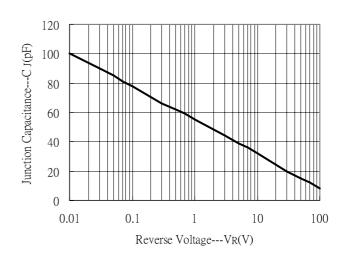
Reverse Leakage Current vs Reverse Voltage



Forward Current vs Forward Voltage



Junction Capacitance vs Reverse Voltage



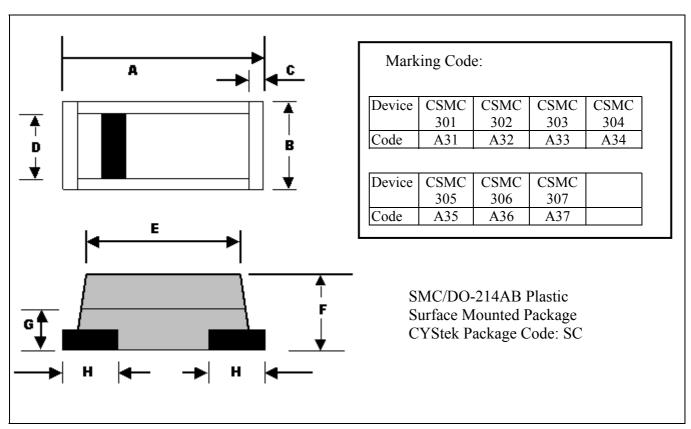


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SMC/DO-214AB Dimension



*:Typical

	Typical								
DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.	וווט	Min.	Max.	Min.	Max.
Α	0.260	0.276	6.6	7.0	Е	0.228	0.244	5.8	6.2
В	0.173	0.189	4.4	4.8	F	0.071	0.087	1.8	2.2
С	0.012	0.012(typ) 0.3(typ)		typ)	G	0.032(typ)		0.8(typ)	
D	0.144	0.152	3.6	3.8	Н	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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