

S3A thru S3M SERIES

SURFACE MOUNT RECTIFIER



**CHENG-YI
ELECTRONIC**



FEATURES

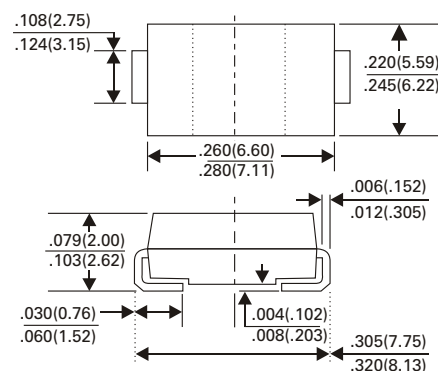
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwrites Laboratory Flammability Classification 94V0
- Glasspassivated chip junction
- high temperature soldering: 260°C/10seconds at terminals

MECHANICAL DATA

- Case: JEDEC Do-201AD molded plastic
- Terminals: plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard Packaging: 16mm tape (EIA STD EIA-481)
- Weight: 0.007 ounce, 0.21 gram

VOLTAGE RANGE 50 TO 1000 Volts
CURRENT 3.0 Amperes

SMC/DO-214AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATINGS	SYMBOL	S3A	S3B	S3D	S3G	S3J	S3K	S3M	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, at $T_L = 75^\circ\text{C}$	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100							Amps
Maximum Instantaneous Forward Voltage at 3.0A	V_F	1.20							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5.0							μA
		250							
Maximum Reverse Recovery Time (Note 1)	T_{RR}	2.5							μS
Typical Junction Capacitance (Note 2)	C_J	60							pF
Maximum Thermal Resistance (Note 3)	$R_{\theta\text{JL}}$	13							$^\circ\text{C} / \text{W}$
	$R_{\theta\text{JL}}$	47							
Operating and Storage Temperature Range	T_J T_{STG}	-50 to +150							$^\circ\text{C}$

Notes : 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$
2. Measured at 1 MHz and Applied $V_r = 4.0$ volts
3. 8.0mm^2 (0.13mm thick) land areas

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RATING AND CHARACTERISTICS CURVES S3A THRU S3M

Fig.1 - FORWARD CURRENT DERATING CURVE

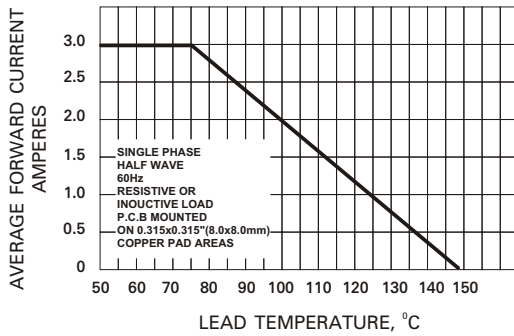


Fig.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

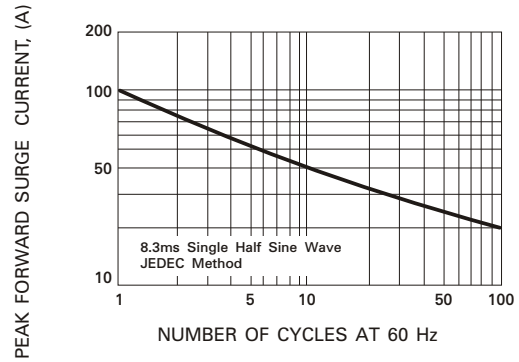


Fig.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

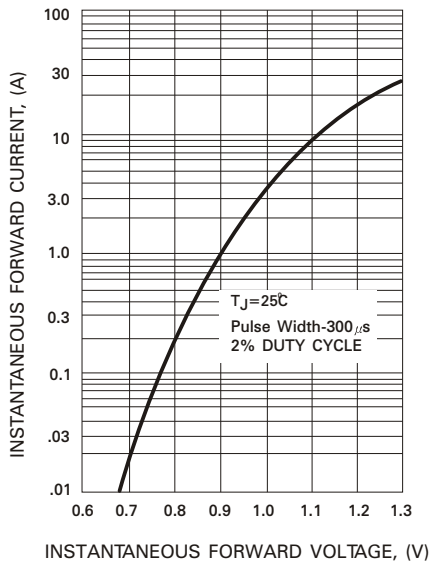


Fig.4 - TYPICAL JUNCTION CAPACITANCE

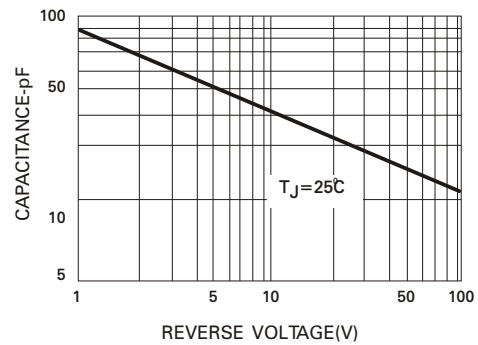


Fig.5 - TYPICAL REVERSE CHARACTERISTICS

