

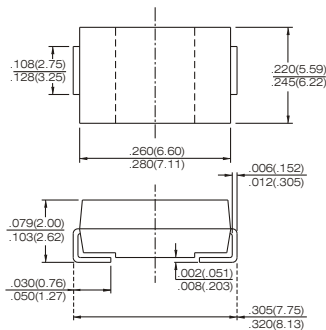
# S3AC thru S3MC

## SURFACE MOUNT STANDARD RECOVERY RECTIFIER

VOLTAGE - 50 TO 1000 VOLTS CURRENT - 3.0 AMPERES



SMC/DO-214AB



### FEATURES

- For surface mount applications
- Glass passivated junction
- Low profile package
- Built-in strain relief
- Easy pick and place
- Low forward voltage drop
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering : 260°C/10 seconds at terminsls

### MECHANICAL DATA

Case : JEDEC DO-214AB molded plastic  
 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity : Indicated by cathode band  
 Standard Package : 12mm tape (EIA STD EIA-481)  
 Weight : 0.007 ounce, 0.21gram

### 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%

	SYMBOL	S3AC	S3BC	S3DC	S3GC	S3JC	S3KC	S3MC	UNITS
Maximum Repetitive 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 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	100							Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.2							Volts
Maximum DC Reverse Current (NOTE 1) $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 125^\circ\text{C}$	$I_R$	5 250							$\mu\text{A}$
Typical Reverse Recovery Time (NOTE 1)	$T_{RR}$	2.5							nS
Maximum Thermal Resistance (NOTE 2)	$R_{\theta JA}$ $R_{\theta JL}$	13 47							$^\circ\text{C} / \text{W}$
Typical Junction Capacitance (NOTE 3)	$C_J$	53							pF
Operating and Storage Temperature Range	$T_J$ $T_{STG}$	-55 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 1.0 MHz and applied reverse voltage of 4.0 volts
3. 8.0mm<sup>2</sup> (0.13mm thick) land areas.

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### RATINGS AND CHARACTERISTIC CURVES S3AC THRU S3MC

Fig. 1 - FORWARD CURRENT DERATING CURVE

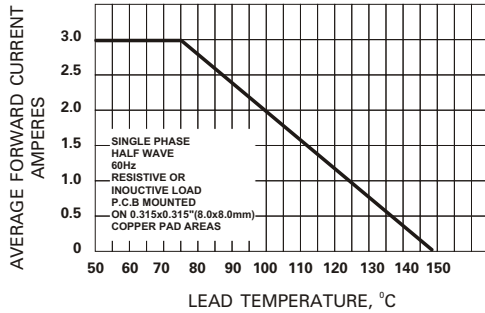


Fig. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

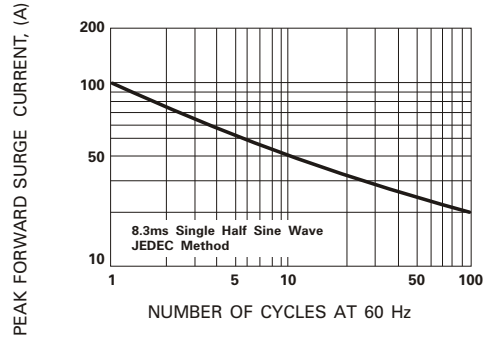


Fig. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

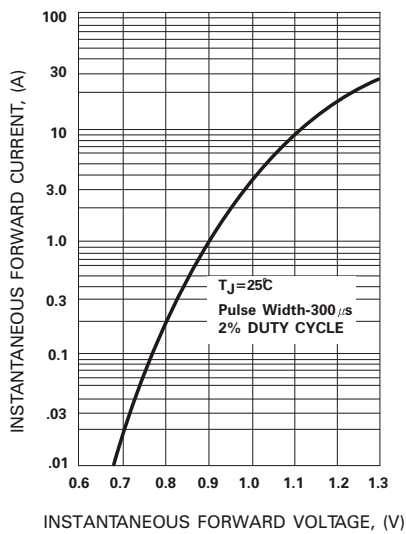


Fig. 4 - TYPICAL JUNCTION CAPACITANCE

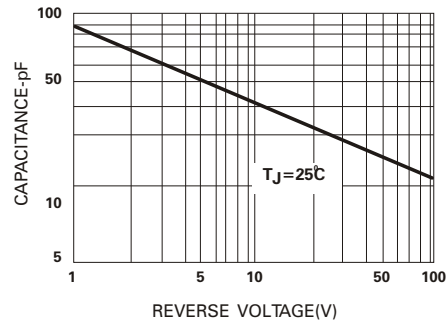


Fig. 5 - TYPICAL REVERSE CHARACTERISTICS

