DATA SHEET

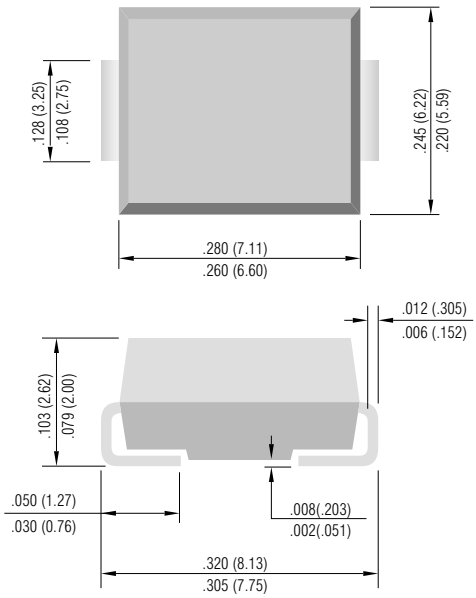
S3A~S3M

SURFACE MOUNT RECTIFIER

VOLTAGE- 50-100 Volts CURRENT- 3.0 Ampere

SMC / DO-214AB

Unit: inch (mm)



FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- glass passivated iunction
- High temperature soldering guaranteed: 260°C /10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic
Terminals:Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Standard packaging: 16mm tape (EIA-481)
Weight: 0.007 ounce, 0.21 gram

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%.

	SYMBOLS	S3A	S3B	S3D	S3G	S3J	S3K	S3M	UNITS
Maximum Recurrent 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_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_L = 75°C	I(AV)	3.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100.0							A
Maximum Instantaneous Forward Voltage at 3.0A	V_F	1.20							V
Maximum DC Reverse Current (Note 1) T_A= 25°C at Rated DC Blocking Voltage T_A=125°C	I_R	5.0 250							µA µA
Typical Reverse Recovery Time(Note1)	T_{RR}	2.5							µS
Maximum Thermal Resistance(Note 2)	RθJL RθJA	13.0 47.0							°C/W
Typical Junction Capacitance(Note3)	C_J	53.0							pF
Operating and Storage Temperature Range	T_{STG}	-55 to +150							°C

NOTES:
1.Reverse Recovery Test Conditions:I_F=0.5A,I_R=1.0A,Irr=0.25A.
2.Measured at 1.0 MHZ and applied Vr=4.0 volts.
3.8.0mm^2(.013mm thick)land areas.

RATING AND CHARACTERISTIC CURVES

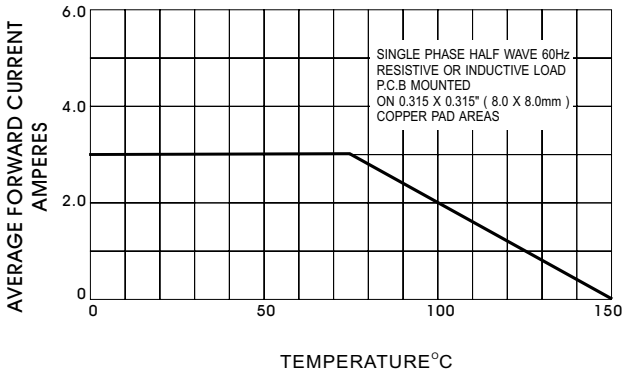


Fig. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

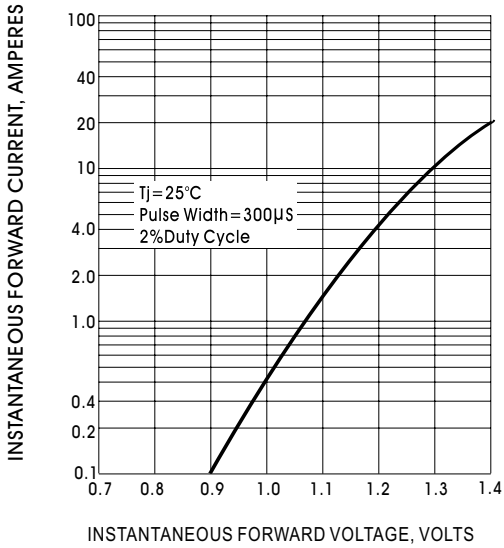


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISITCS PER ELEMENT

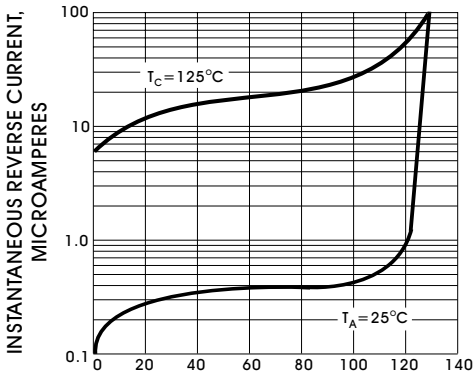


Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS

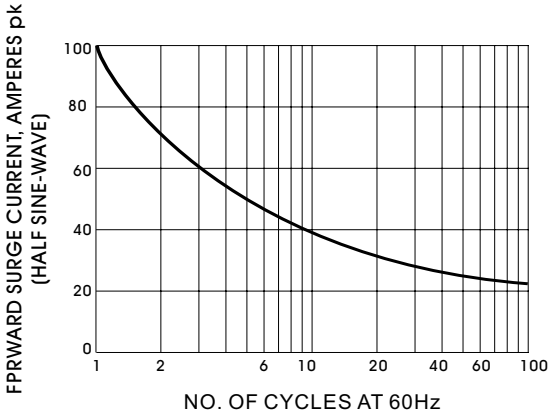


Fig. 4- MAXIMUM NON-REPETITEVE PEAK FORWARD SURGE CURRENT

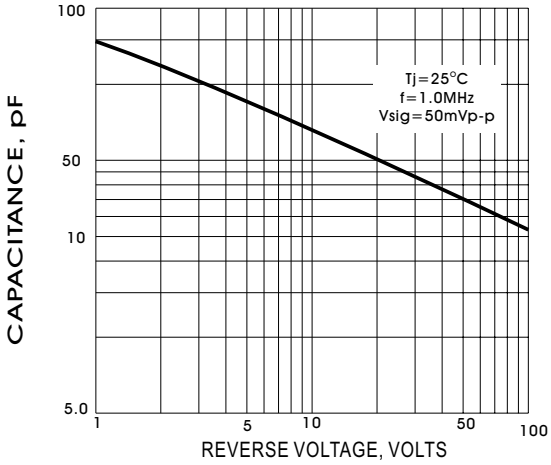


Fig. 5- TYPICL JUNCTION CAPACITANCE PER ELEMENT