

SURFACE MOUNT RECTIFIER

Voltage 50 to 1000 Volt Current 1 Ampere

FEATURES

- Plastic package has Underwriters Laboratory Flammability
- Classification 94V-O
- For surface mounted applications in order to optimize board space
- Easy pick and place
- Glass passivated junction
- Complete device submersible temperature of 260°C for 10 seconds in solder bath
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Expsemi electronics



MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Standard packaging: 12mm tape (EIA-481)
- Polarity: Color band denotes cathode end

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%.

PARAMETER	SYMBOL	S1AB	S1BB	S1DB	S1GB	S1JB	S1KB	S1MB	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 Current at $T_L=100^{\circ}C$	$I_{F(AV)}$	1							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum Forward Voltage at 1A	V_F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$ $T_J=125^{\circ}C$	I_R	5 50							μA
Typical Junction Capacitance (Notes 1)	C_J	12							pF
Typical Junction Resistance (Notes 2)	$R_{\theta JL}$ $R_{\theta JA}$	35 75							$^{\circ}C / W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^{\circ}C$

NOTES:

1. Measured at 1 Mhz and Applied $V_r = 4$ volts.
2. $8mm^2$ (0.013 mm thick) land areas.

RATING AND CHARACTERISTIC CURVES

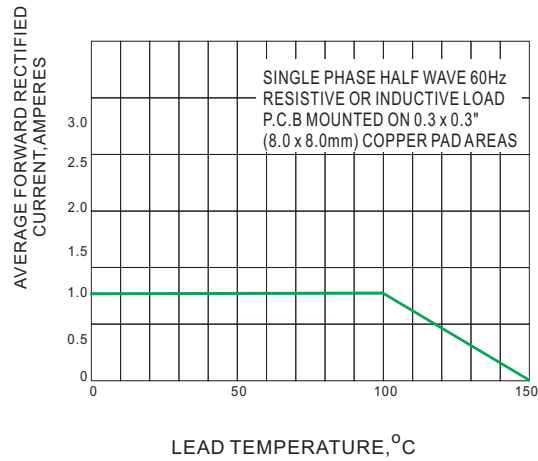


Fig.1 FORWARD CURRENT DERATING CURVE

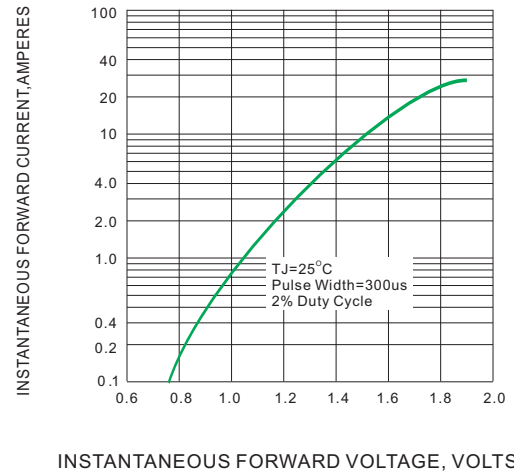


Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

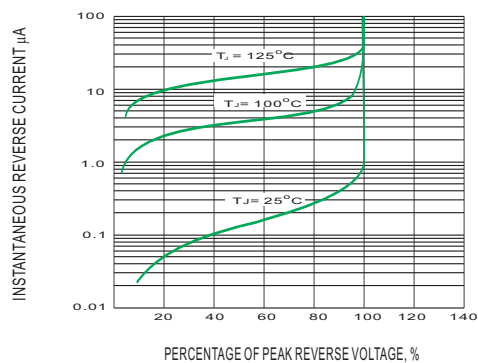


Fig.3-TYPICAL REVERSE CHARACTERISTIC

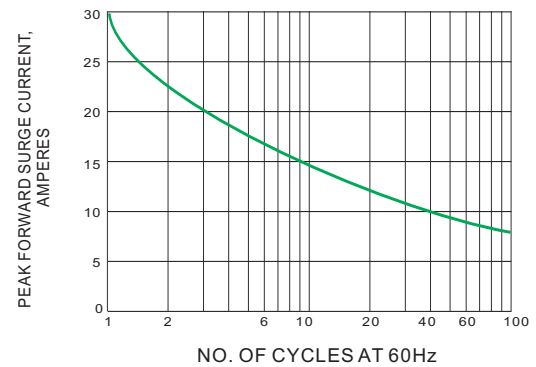


Fig.4 MAXIMUM NON REPETITIVE PEAK SURGE CURRENT

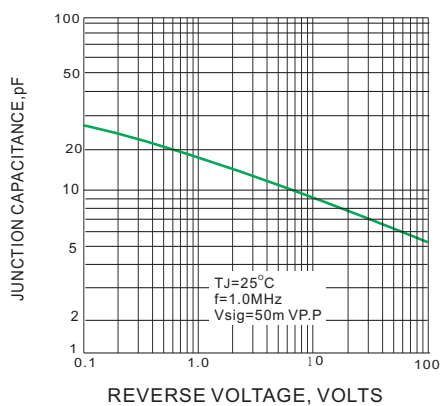
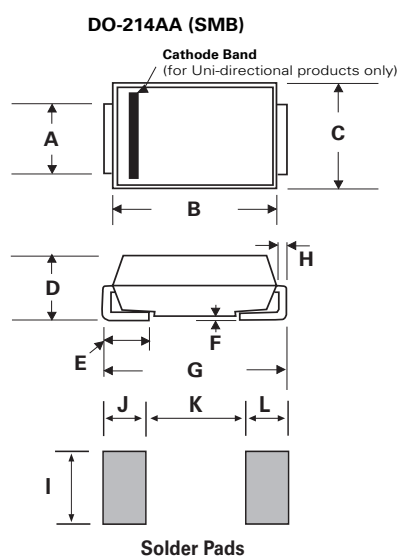


Fig.5 TYPICAL JUNCTION CAPACITANCE

Dimensions

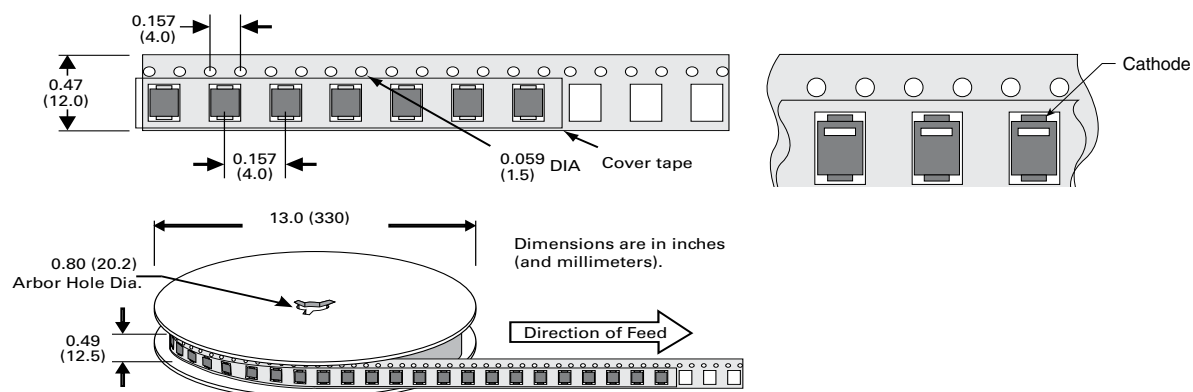


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.066	0.091	1.700	2.300
B	0.160	0.191	4.060	4.850
C	0.130	0.155	3.300	3.940
D	0.083	0.098	2.100	2.500
E	0.030	0.060	0.760	1.520
F	-	0.011	-	0.300
G	0.200	0.220	5.08	5.590
H	0.006	0.012	0.152	0.310
I	0.082	-	2.100	-
J	0.070	-	1.800	-
K	-	0.107	-	2.740
L	0.070	-	1.800	-

Ordering Information

Part number	Component Package	Quantity	Packaging Option	Packaging Specification
S1XB	DO-214AA	5000	Tape & Reel - 12mm tape/13" reel	EIA STD RS-481

Tape and Reel Specication



Note: Devices are packde in accordance with EIA standard RS-481-Aand specification given above.