



SMA



Features

- Low reverse leakage
- Glass passivated junction
- High forward surge current capability
- High efficiency operation
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0

Mechanical Data

- CASE: SMAJ(DO-214AC) Molded Plastic
- Polarity: Color band denotes cathode end
- Mounting position: ANY
- Weight: 0.0025 ounces, 0.071 gram

Maximum Ratings & Electrical Characteristics

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

Parameter	SYMBOLS	ES1D	ES1J	UNITS
	MARKING	ES1D	ES1J	
Maximum repetitive peak reverse voltage	V_{RRM}	200	600	V
Maximum RMS voltage	V_{RMS}	140	420	V
Maximum DC blocking voltage	V_{DC}	200	600	V
Maximum average forward rectified current at $T_L = 100^\circ\text{C}$	$I_{(AV)}$	1.0		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30.0		A
Maximum instantaneous forward voltage at 1.0A	V_F	0.95	1.70	V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 125^\circ\text{C}$	I_R	10 500		μA
Maximum reverse recovery time(Note 1)	T_{rr}	35		ns
Typical junction capacitance (Note2)	C_J	18.0		pF
Typical thermal resistance	R_{qJA}	65.0		C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150		C

Note: 1.Reverse recovery time test condition: $I_F = 0.5\text{A}$ $I_R = 1.0\text{A}$ $I_{rr} = 0.25\text{A}$

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMA	Tape/Reel, 11" reel	5000	EIA-481-1

Ratings and Characteristic Curves

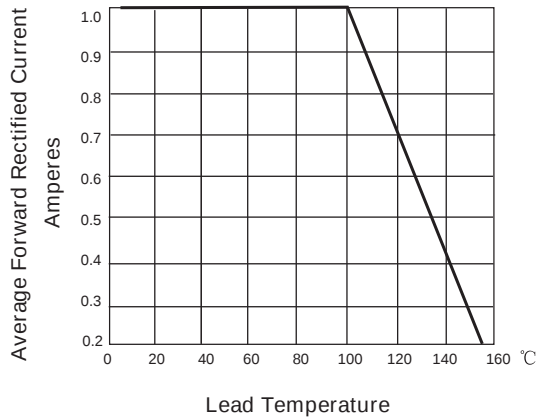


FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

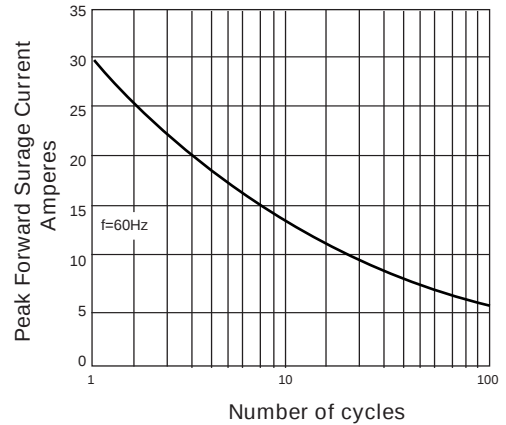


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

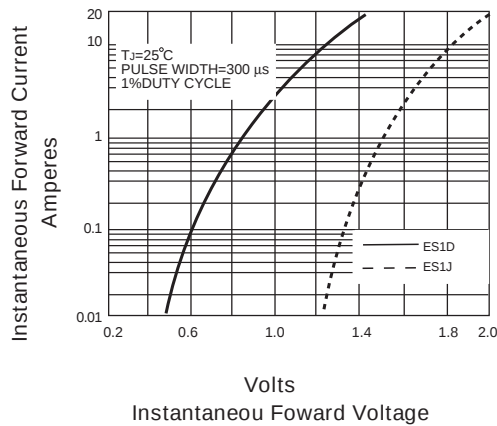


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

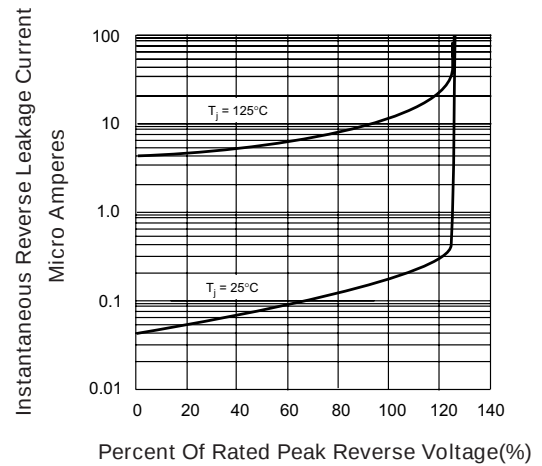


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

Package Outline Dimensions: SMA(DO-214AC)

Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	4.1	4.3	0.161	0.169
D	2.5	2.7	0.098	0.106
D1	1.3	1.5	0.051	0.059
T	4.8	5.2	0.189	0.205
T1	0.9	1.5	0.035	0.060
d	-	0.2	-	0.008
H	2.05	2.35	0.081	0.093
H1	2.0	2.2	0.079	0.087