

SMC

Features

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

Mechanical Data

- CASE: SMCJ(DO-214AB) Molded Plastic
- Polarity: Color band denotes cathode end
- Mounting position: ANY
- Weight: 0.009 ounces, 0.25 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	S3MC	UNITS
	MARKING	S3M	
Maximum repetitive peak reverse voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC blocking voltage	V_{DC}	1000	V
Maximum average forward rectified current at $T_L=100\text{ C}$	$I_{(AV)}$	3.0	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100.0	A
Maximum instantaneous forward voltage at 3.0A	V_F	1.10	V
Maximum DC reverse current $T_A=25\text{ C}$ at rated DC blocking voltage $T_A=125\text{ C}$	I_R	5.0 500	$\mu\text{ A}$
Typical junction capacitance (Note1)	C_J	40.0	pF
Typical thermal resistance	R_{qJA}	80.0	C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	C

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

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SMC	Tape/Reel, 13" reel	3000	EIA-481-1

Ratings and Characteristic Curves

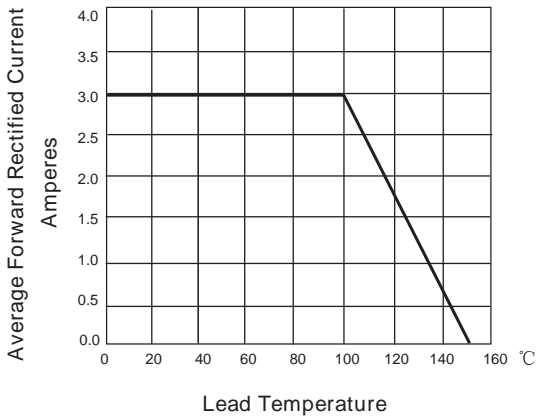


FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

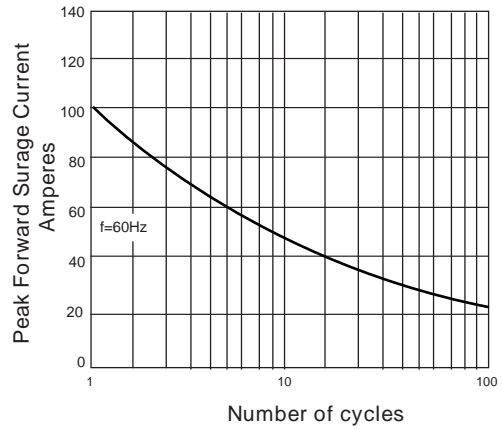


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

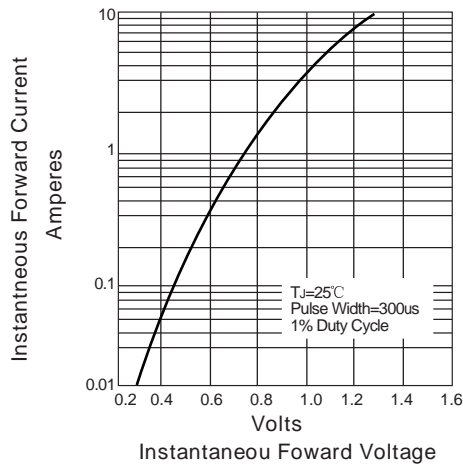


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

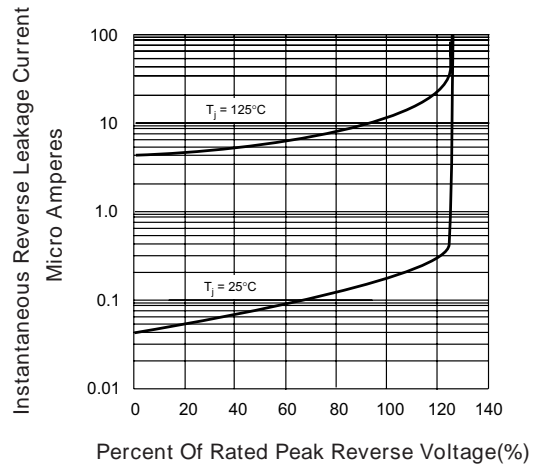


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

Package Outline Dimensions: SMC(DO-214AB)

Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	6.75	6.95	0.265	0.274
D	5.75	5.95	0.226	0.234
D1	2.9	3.1	0.114	0.122
T	7.9	8.1	0.311	0.319
T1	1.0	1.4	0.039	0.055
d	-	0.2	-	0.008
H	2.45	2.65	0.096	0.104
H1	2.3	2.5	0.09	0.098