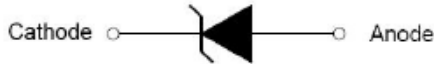


**SMC**

**Features**

Low forward voltage drop  
 Guarding protection  
 Glass passivated junction  
 High current capability  
 High efficiency operation  
 Extremely low thermal resistance  
 Halogen free and RoHS compliant

**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%.)

CHARACTERISTICS	SYMBOL	SS54C	SS56C	SS510C	SS520C	UNITS
	Marking	SS54	SS56	SS510	SS520	
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	60	100	200	V
Maximum RMS voltage	$V_{RWS}$	28	42	70	140	V
Maximum DC blocking voltage	$V_{DC}$	40	60	100	200	V
Maximum average forward rectified current at $T_L=90^\circ\text{C}$	$I_{F(AV)}$	5.0				A
Peak forward surge current 8.3ms single half-sine-wave	$I_{FSM}$	120				A
Maximum instantaneous forward voltage at $I_{FM}=5.0\text{A}$ (NOTE1)	$V_F$	0.55	0.7	0.85	0.95	V
Maximum DC reverse current $T_J=25^\circ\text{C}$ at rated DC blocking voltage $T_J=125^\circ\text{C}$	$I_R$	0.2 50		0.1 5.0		m A
Maximum thermal resistance	$R_{\theta JL}$	50				$^\circ\text{C/W}$
Operating temperature range	$T_J$	-55 ---- +125				$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 ---- +150				$^\circ\text{C}$

NOTE: 1.Pulse test: Pulse width 300us,duty cycle 1 %

**Summary of Packing Options**

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

## Ratings and Characteristic Curves

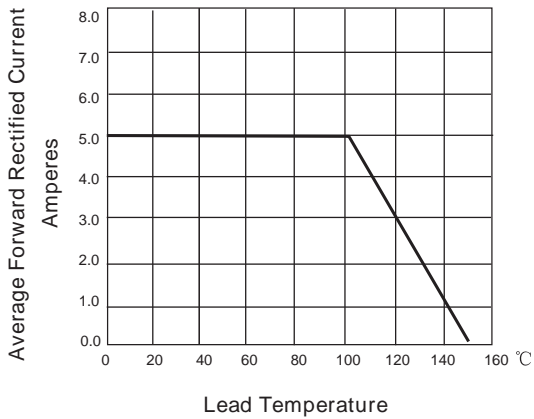


FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

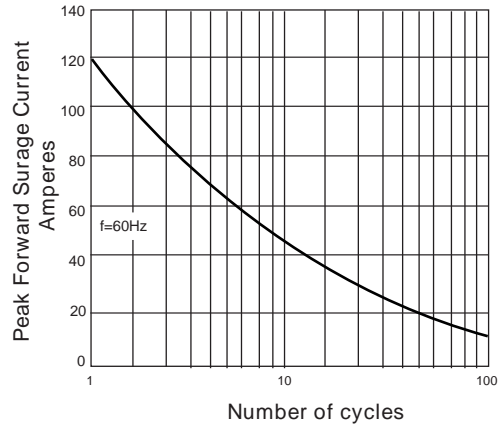


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

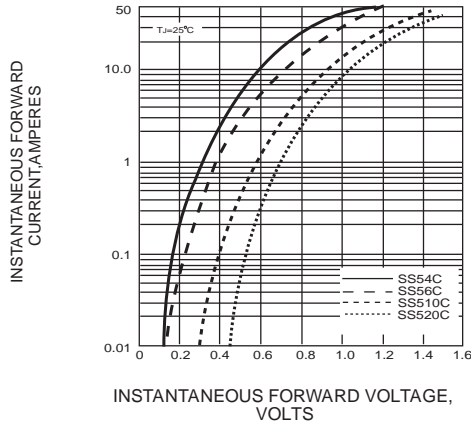


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

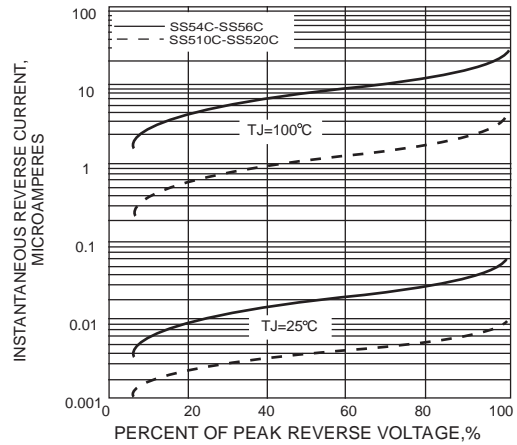


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

## 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