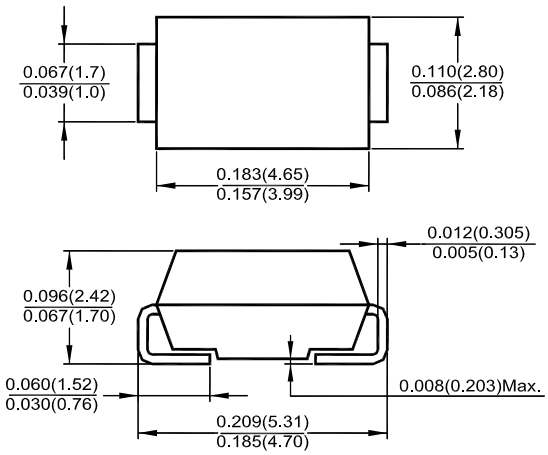
M1D THRU M7D

Surface Mount General Purpose Plastic Rectifier
Reverse Voltage - 50 to 1000 V
Forward Current - 1 A

SMA (DO-214AC)



Dimensions in inches and (millimeters)

Features
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

Mechanical Data
- **Case:** SMA (DO-214AC), molded plastic
- **Terminals:** Solder plated, solderable per MIL-STD-750, method 2026
- **Polarity:** Indicated by cathode band

Absolute Maximum Ratings and Characteristics
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	M1D	M2D	M3D	M4D	M5D	M6D	M7D	Units
Maximum Repetitive 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_a = 50 °C	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current T_a = 25 °C at Rated DC Blocking Voltage T_a = 125 °C	I_R	5 50							μA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	55							°C/W
Typical Thermal Resistance, Junction to Lead	$R_{\theta JL}$	25							°C/W
Operating Junction and Storage Temperature Range	T_J, T_{Stg}	- 55 to + 150							°C

FIG.1: FORWARD CURRENT DERATING CURVE

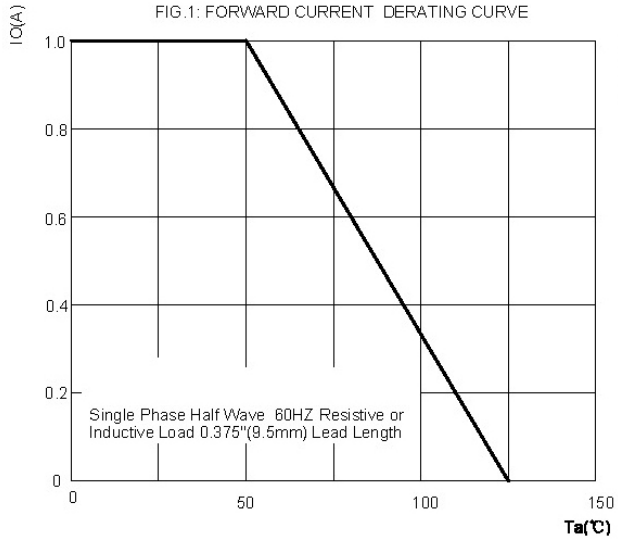


FIG.2:MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

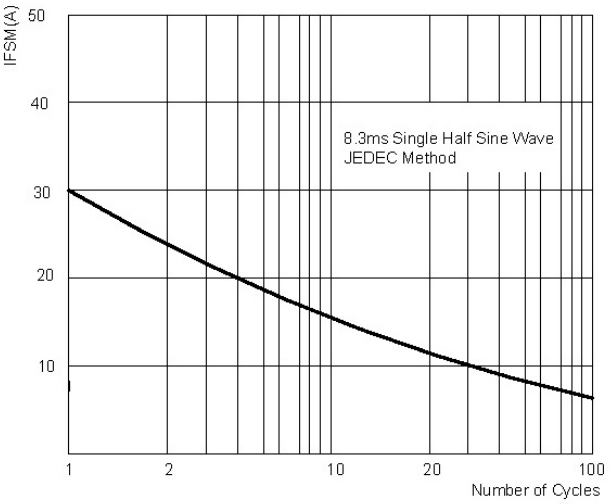


FIG.3: TYPICAL FORWARD CHARACTERISTICS

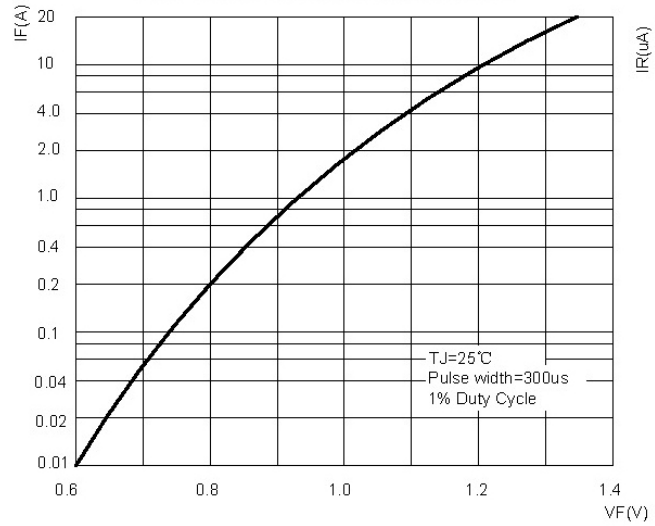


FIG.4:TYPICAL REVERSE CHARACTERISTICS