

SE1A THRU SE1M

SURFACE MOUNT HIGH EFFICIENT RECTIFIER

Reverse Voltage - 50 to 1000 V

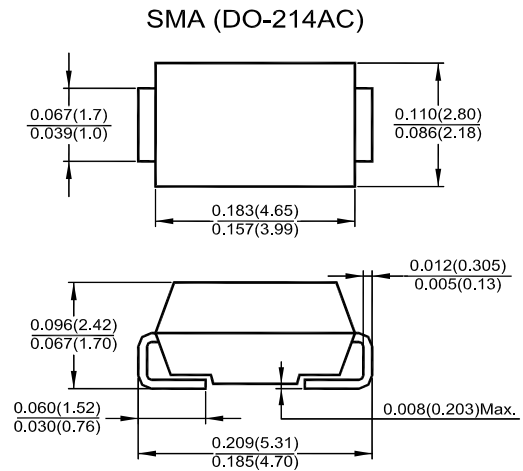
Forward Current - 1 A

Features

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Fast switching for high efficiency

Mechanical Data

- **Case:** SMA (DO-214AC) molded plastic
- **Epoxy:** UL 94V-0 rate flame retardant
- **Lead:** Lead formed for surface mount
- **Polarity:** color band denotes cathode end
- **Mounting position:** Any



Dimensions in inches and (millimeters)

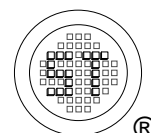
Maximum Ratings and Electrical Characteristics

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	Symbols	SE1A	SE1B	SE1D	SE1E	SE1G	SE1J	SE1K	SE1M	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Current T _a = 55 °C	I _{F(AV)}	1								A
Maximum Peak Forward Surge Current, 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30								A
Maximum Forward Voltage at I _F = 1 A	V _F	1.1					1.7		2.2	V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a = 100 °C	I _R	5 50								µA
Maximum Reverse Recovery Time ¹⁾	t _{rr}	50					75			ns
Typical Junction Capacitance ²⁾	C _J	50								pF
Junction and Storage Temperature Range	T _J , T _{Stg}	- 65 to + 150								°C

¹⁾ Reverse recovery test conditions: $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$

²⁾ Measured at 1 MHz and applied reverse voltage of 4 V



SE1A THRU SE1M

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

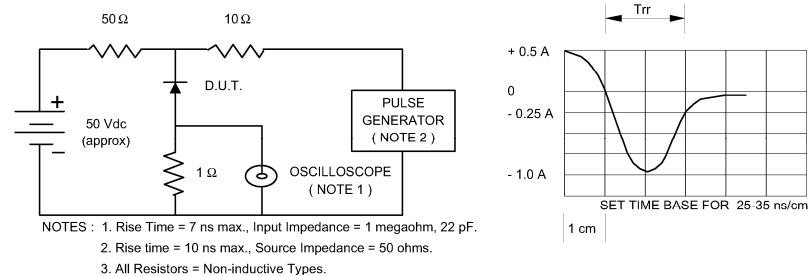


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

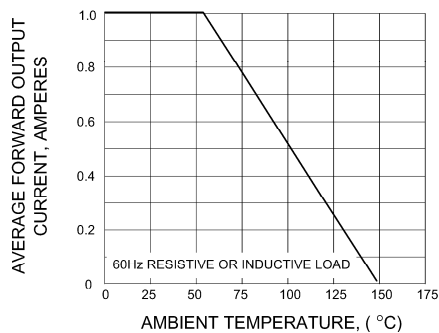


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

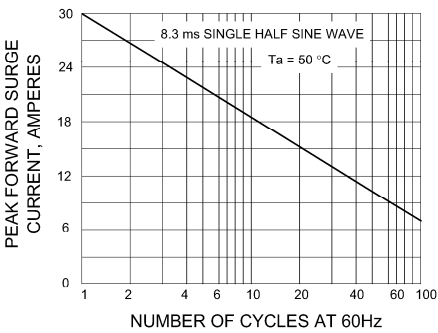


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

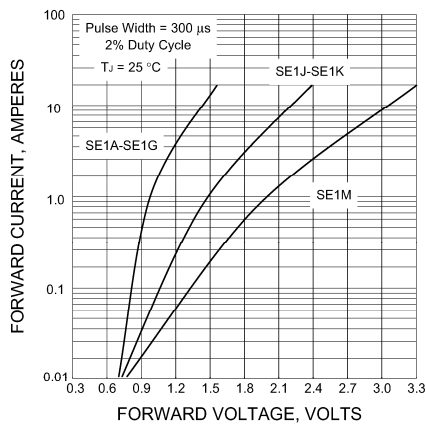


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

