

Surface Mount Super Fast Rectifier

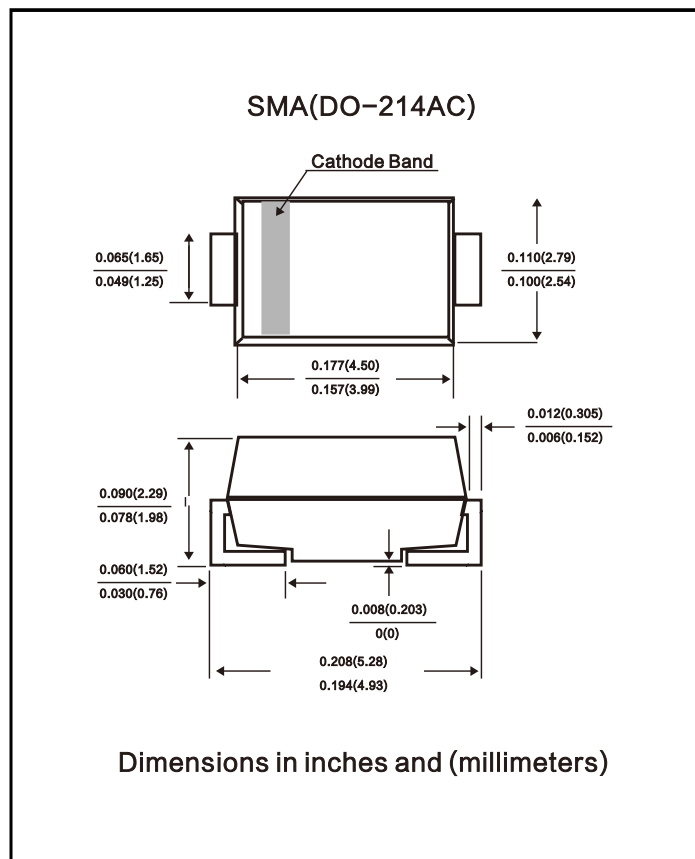
FEATURES

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250 °C for 10 Seconds At Terminals
- Superfast Recovery Times For High Efficiency

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

MCC Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
ES1A	ES1A	50V	35V	50V
ES1B	ES1B	100V	70V	100V
ES1C	ES1C	150V	105V	150V
ES1D	ES1D	200V	140V	200V
ES1G	ES1G	400V	280V	400V
ES1J	ES1J	600V	420V	600V
ES1K	ES1K	800V	560V	800V
ES1M	ES1M	1000V	700V	1000V



Dimensions in inches and (millimeters)

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$F_{(AV)}$	1.0A	$T_J = 75^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	ES1A-D: 975V ES1G-K: 1.35V ES1M: 1.60V	$F_M = 1.0A$; $T_J = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 100µA	$T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$
Maximum Reverse Recovery Time	T_{rr}	50ns 60ns 100ns	$F = 0.5A$, $I_R = 1.0A$, $I_{rr} = 0.25A$
Typical Junction Capacitance	C_J	45pF	Measured at 1.0MHz, $V_R = 4.0V$

*Pulse test: Pulse width 200 µsec, Duty cycle 2%

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Figure 1
Typical Forward Characteristics

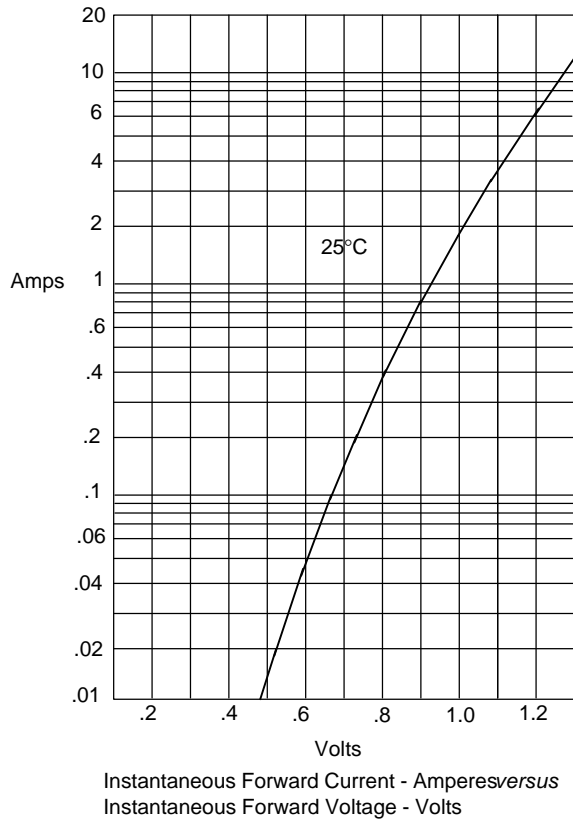


Figure 2
Forward Derating Curve

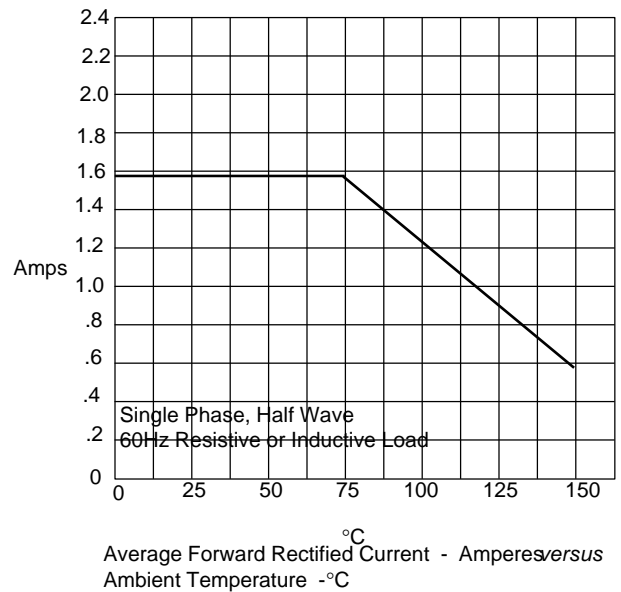


Figure 3
Junction Capacitance

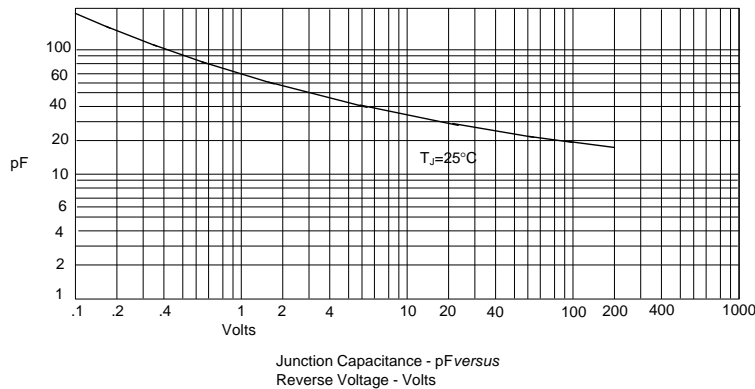


Figure 4
Peak Forward Surge Current

