

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 200 Volts CURRENT 1.0 Ampere**

**FEATURES**

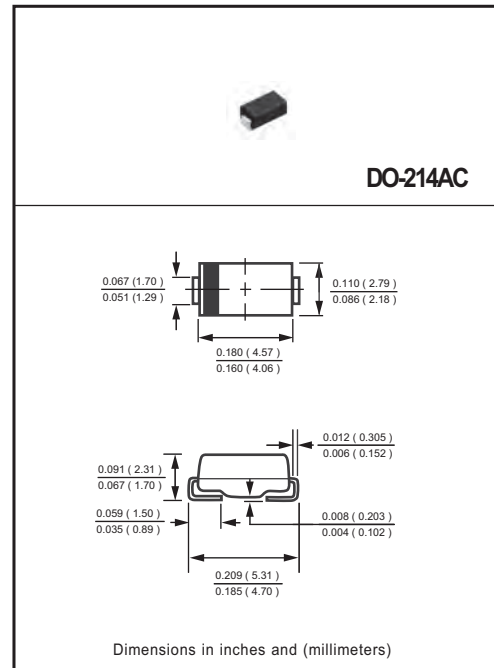
- \* Low switching noise
- \* Low forward voltage drop
- \* High current capability
- \* High switching capability
- \* High surge capability
- \* High reliability
- \* P/N suffix V means AEC-Q 101 qualified
- \* P/N suffix V means Halogen-free

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.057 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Resistive or inductive load.



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

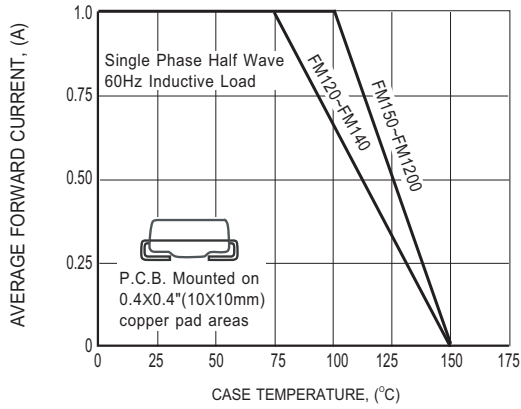
RATINGS	SYMBOL	FM120	FM130	FM140	FM150	FM160	FM180	FM1100	FM1150	FM1200	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	Volts
Maximum Average Forward Rectified Current at Derating Case Temperature	$I_O$	1.0									Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	40									Amps
Typical Current Square Time	$I^2T$	6.6									A <sup>2</sup> S
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	85									°C/W
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	25									°C/W
Typical Junction Capacitance (Note 2)	$C_J$	80									pF
Operating Temperature Range	$T_J$	-55 to + 150									°C
Storage Temperature Range	$T_{STG}$	-55 to + 150									°C

**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

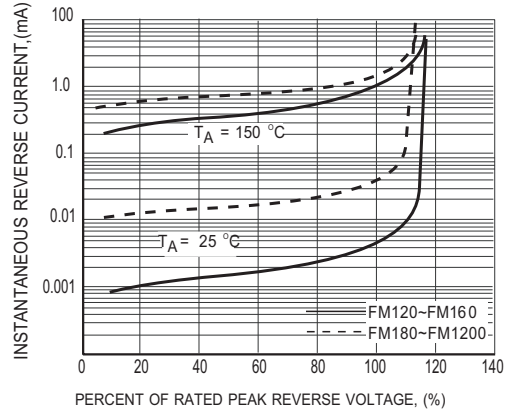
CHARACTERISTICS	SYMBOL	FM120	FM130	FM140	FM150	FM160	FM180	FM1100	FM1150	FM1200	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	$V_F$	.55			.70			.85			Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	$I_R$	@ $T_A = 25^\circ\text{C}$		40				5.0		uA	
		@ $T_A = 150^\circ\text{C}$		8.0				1.0		mA	

- NOTES : 1. Thermal Resistance : Mounted on PCB.  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
 3. Also available in DO-214AA (SMB).  
 4. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

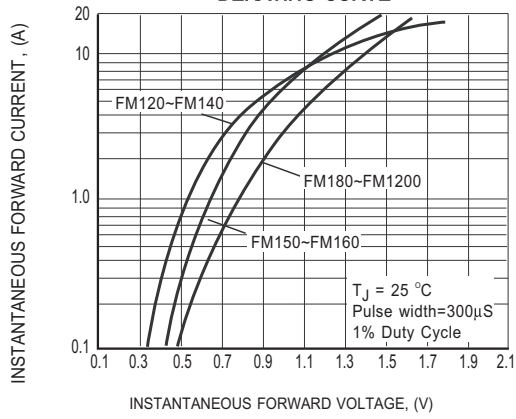
# RATING AND CHARACTERISTICS CURVES ( FM120 THRU FM1200 )



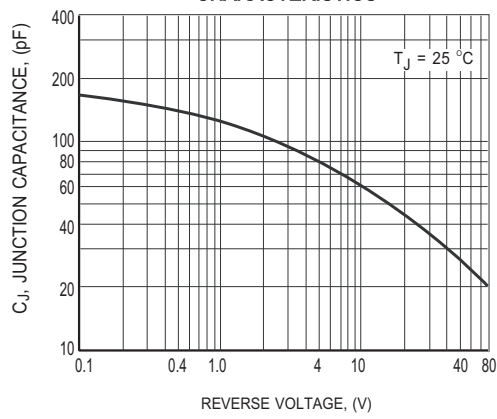
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



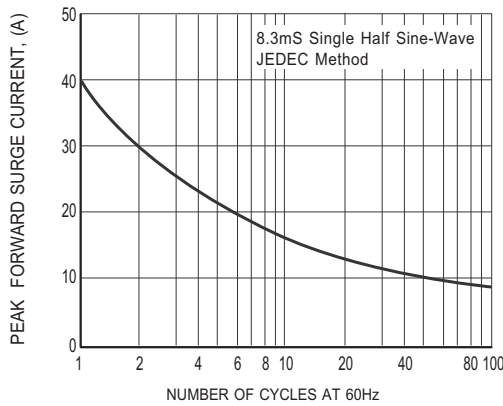
**FIG.2 MAXIMUM REVERSE CHARACTERISTICS**



**FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**

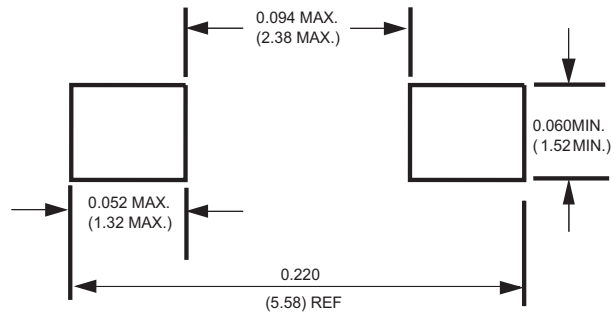


**FIG.4 TYPICAL JUNCTION CAPACITANCE**



**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

## Mounting Pad Layout



Dimensions in inches and (millimeters)

## Marking Description

