

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

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

**FEATURES**

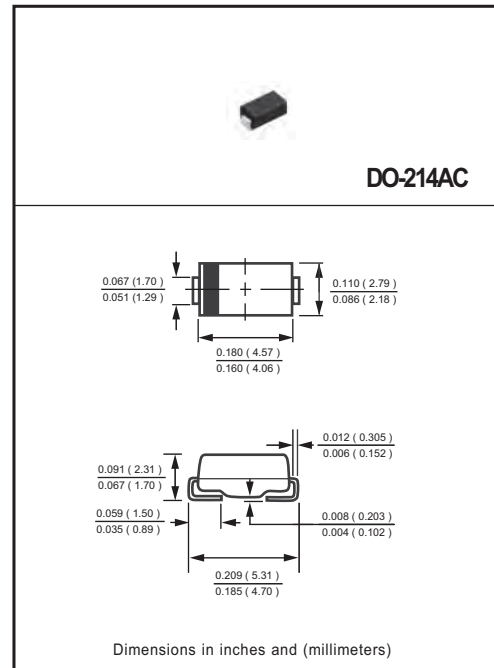
- \* Low switching noise
- \* Low forward voltage drop
- \* High current capability
- \* High switching capability
- \* High surge capability
- \* High reliability
- \* P/N suffix V means AEC-Q 101 qualified
- \* P/N suffix V means Halogen-free

**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)**

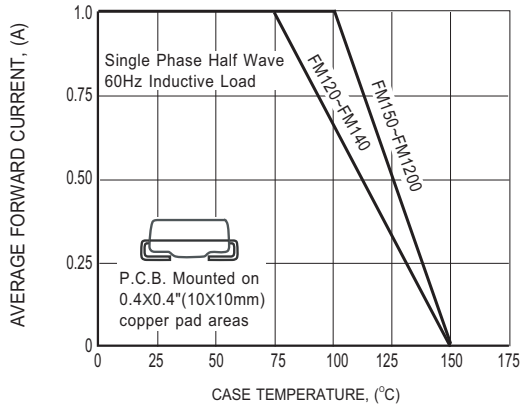
RATINGS	SYMBOL	FM120	FM130	FM140	FM150	FM160	FM180	FM1100	FM1150	FM1200	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	Volts	
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	Volts	
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)**

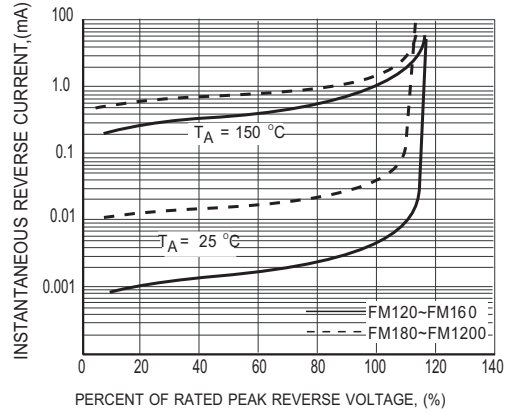
CHARACTERISTICS	SYMBOL	FM120	FM130	FM140	FM150	FM160	FM180	FM1100	FM1150	FM1200	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	$V_F$	.55			.70			.85			Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	$I_R$	40			5.0			1.0			uA
		8.0			1.0						mA

- 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)".

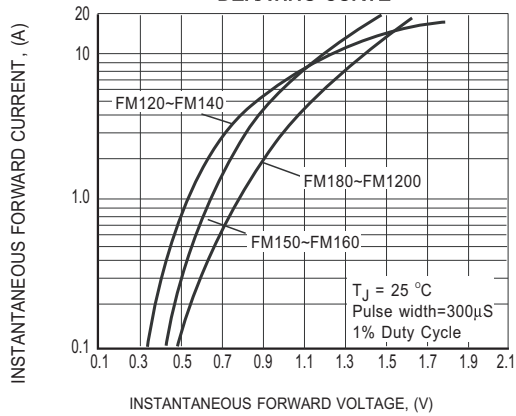
# RATING AND CHARACTERISTICS CURVES ( FM120 THRU FM1200 )



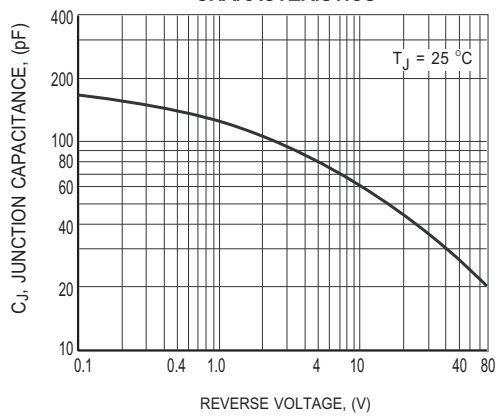
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



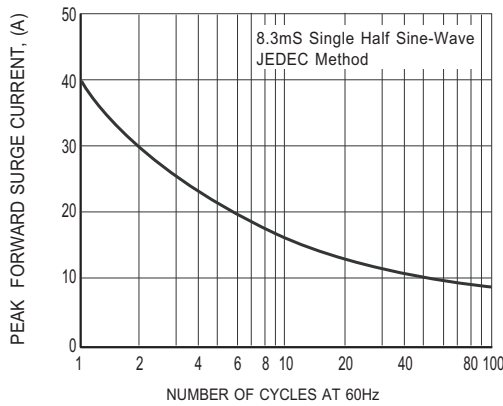
**FIG.2 MAXIMUM REVERSE CHARACTERISTICS**



**FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**

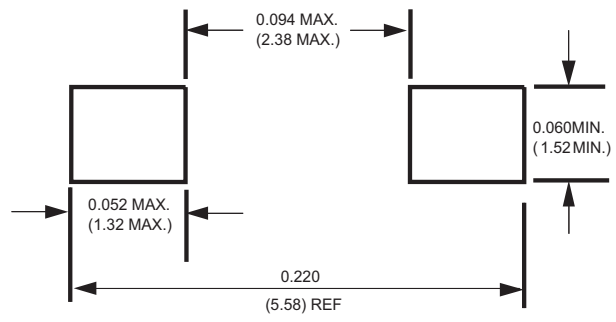


**FIG.4 TYPICAL JUNCTION CAPACITANCE**



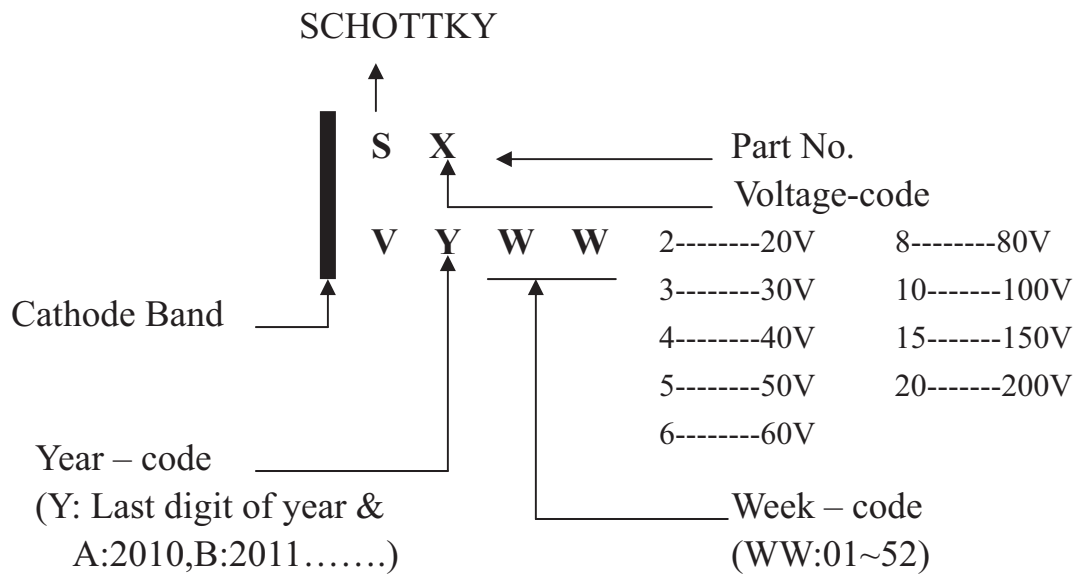
**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

## Mounting Pad Layout



Dimensions in inches and (millimeters)

## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMA	-T	1,500	6,000	---	---	178	390*205*310	48,000	8.40
SMA	-W	5,000	10,000	---	---	330	360*355*360	80,000	14.20

eg(TYPE):FM120-T,FM120-W

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[FM140W-W](#) [FM1100](#) [FM120](#) [FM130](#) [FM140](#) [FM150](#) [FM160](#) [FM1200-W](#) [FM180-W](#)