

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

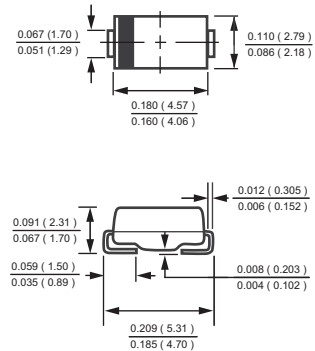
MECHANICAL DATA

- * 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.

DO-214AC



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 ² 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 @ $T_A = 25^\circ\text{C}$	I_R	40						5.0			uA
at Rated DC Blocking Voltage @ $T_A = 150^\circ\text{C}$		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)".

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RATING AND CHARACTERISTICS CURVES (FM120 THRU FM1200)

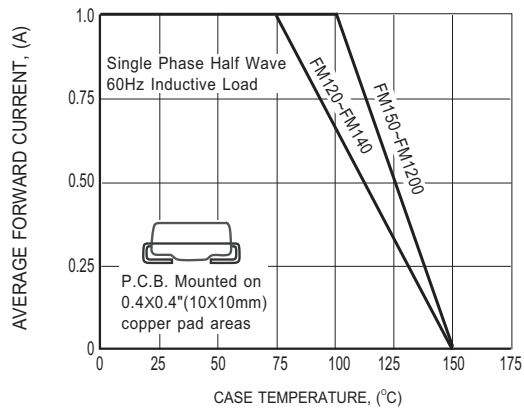


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

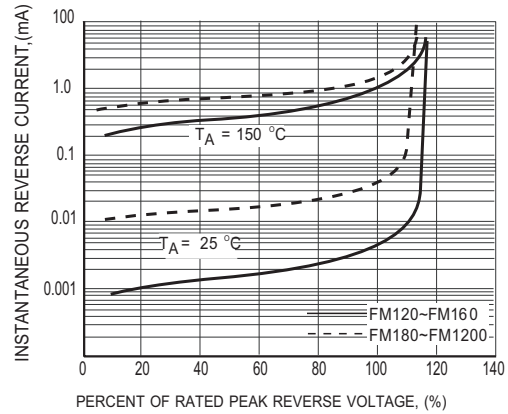


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

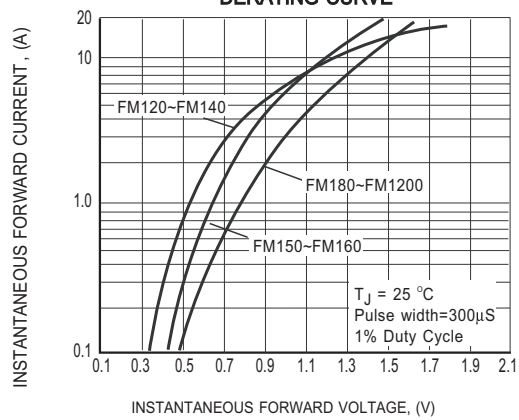


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

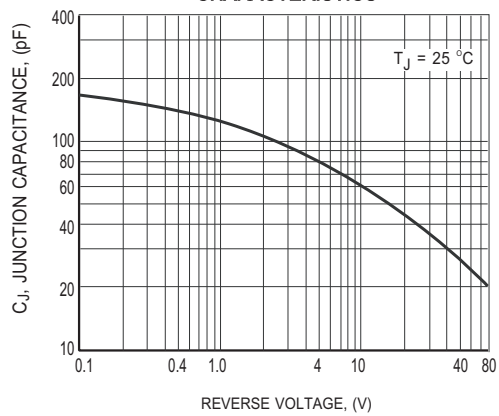


FIG.4 TYPICAL JUNCTION CAPACITANCE

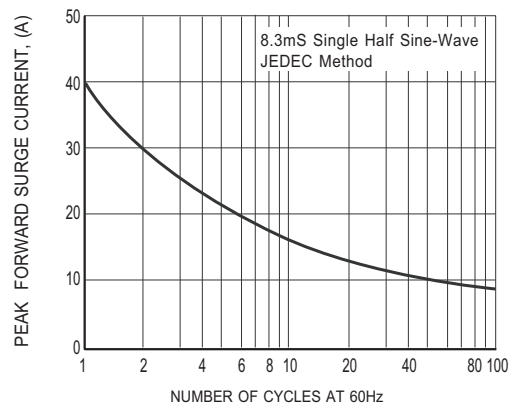
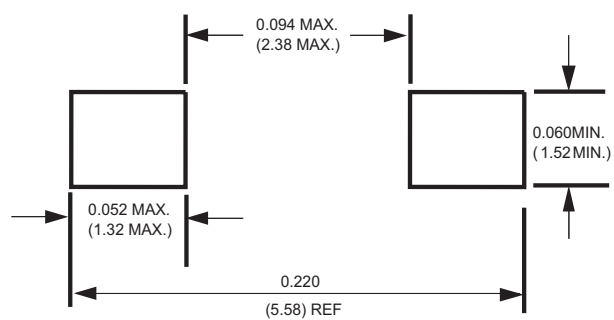


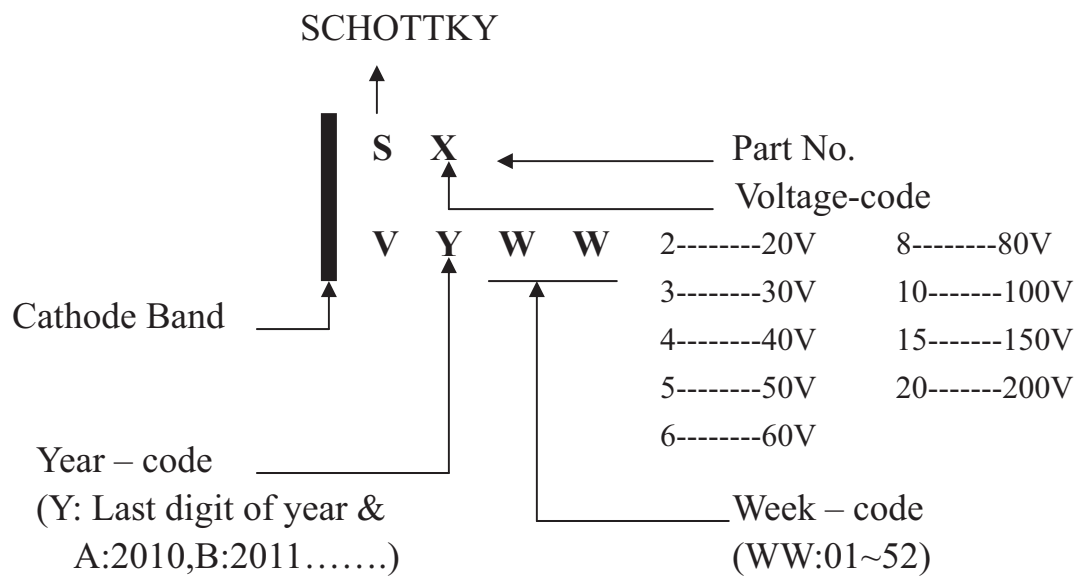
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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