

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 200 Volts CURRENT 3.0 Amperes

FEATURES

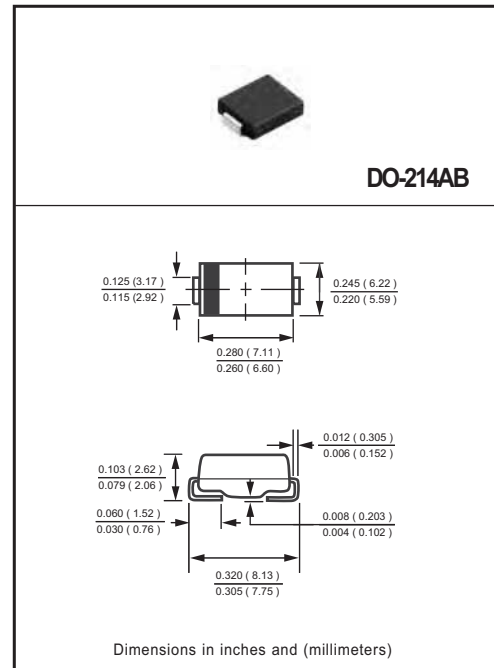
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * P/N suffix V means AEC-Q101 qualified
- * P/N suffix V means Halogen-free

MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-0
- * Mounting position: Any
- * Weight: 0.24 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, resistive or inductive load.



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

| RATINGS | SYMBOL | FM320 | FM330 | FM340 | FM350 | FM360 | FM380 | FM3100 | FM3150 | FM3200 | 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 | |
| Max Avg Forward Rectify Current at Ambient Temp needs To be corrected to Lead Temperature, TL | I_O | | | | | | 3.0 | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | | | | | | 100 | | | | | Amps |
| Typical Current Square Time | I^2T | | | | | | 41.5 | | | | | A ² S |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | | | | | | 55 | | | | | °C/W |
| | $R_{\theta JL}$ | | | | | | 17 | | | | | |
| Typical Junction Capacitance (Note 2) | C_J | | | | | | 200 | | | | | 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 | FM320 | FM330 | FM340 | FM350 | FM360 | FM380 | FM3100 | FM3150 | FM3200 | UNITS | |
|--------------------------------------------------------------|--------|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-----|
| Maximum Instantaneous Forward Voltage at 3.0A DC | V_F | .55 | | | .75 | | .79 | | | | Volts | |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | I_R | | | | | | 60 | 5.0 | | | | u A |
| | | | | | | | 4.0 | 0.4 | | | | mA |

NOTES : 1. Thermal Resistance : Mounted on PCB.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTICS CURVES (FM320 THRU FM3200)

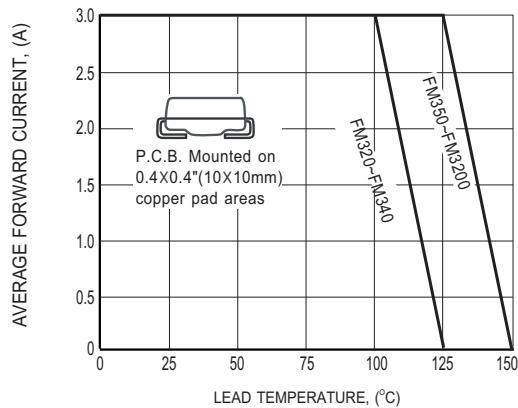


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

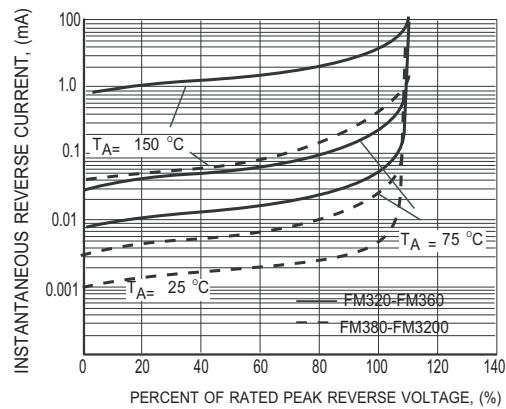


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

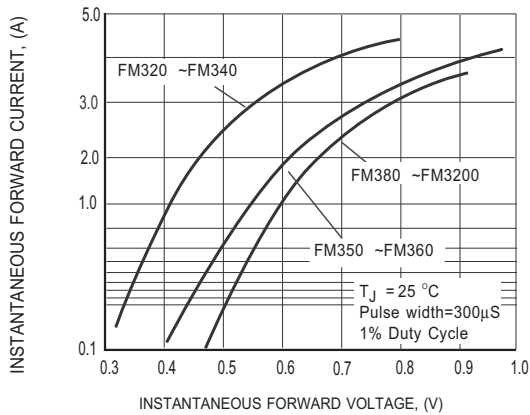


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

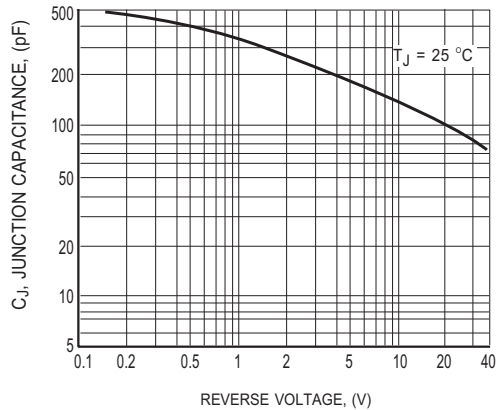


FIG.4 TYPICAL JUNCTION CAPACITANCE

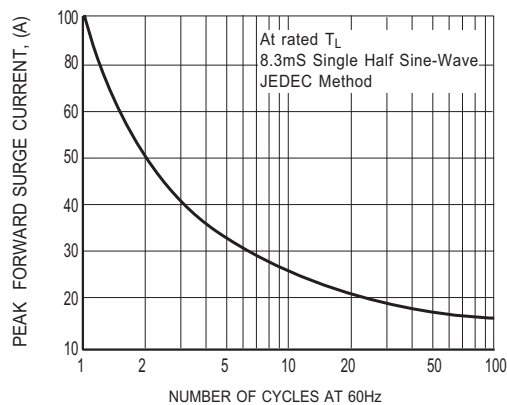
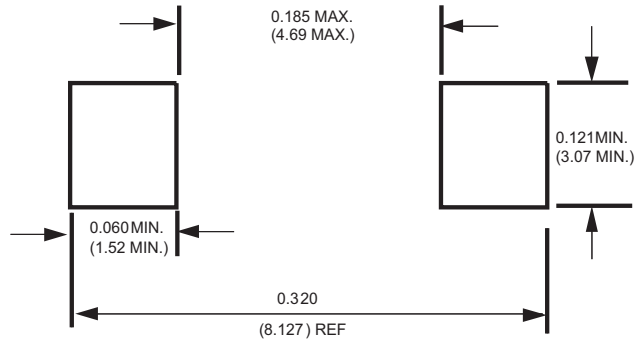


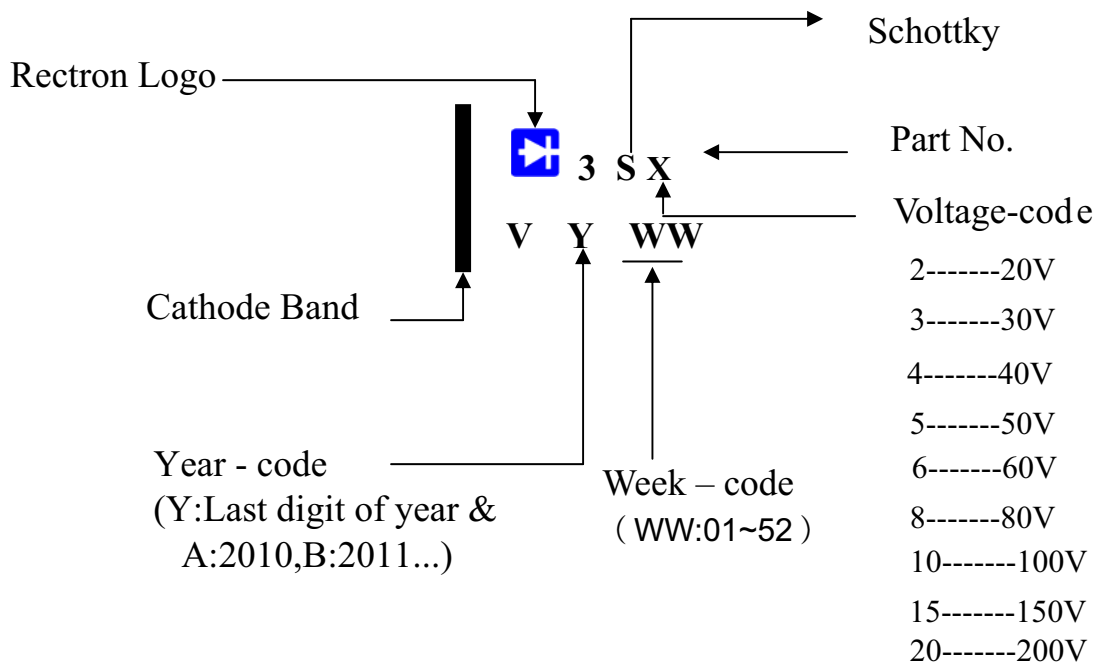
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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) |
|---------|--------------|-------------|------------------|----------------------|-----------------|---------------|------------------|---------------|------------------|
| SMC | -T | 500 | 1,500 | --- | --- | 178 | 390*205*310 | 12,000 | 6.65 |
| SMC | -W | 3,000 | 3,000 | --- | --- | 330 | 360*355*360 | 24,000 | 11.50 |