RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

# FM220A THRU FM2200A

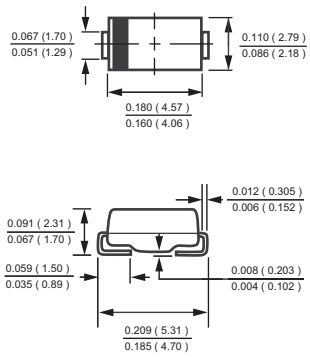
## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### VOLTAGE RANGE 20 to 200 Volts CURRENT 2.0 Ampere

**FEATURES**

* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any
* P/N suffix V means AEC-Q101 qualified, e.g:FM220AV
* P/N suffix V means Halogen-free

DO-214AC




Dimensions in inches and (millimeters)

**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 | FM220A | FM230A | FM240A | FM250A | FM260A | FM280A | FM2100A | FM2150A | FM2200A | 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 Ambient Temperature | $I_O$ | 2.0 | | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 60 | | | | | | | | | Amps |
| Typical Current Square Time | $I^2T$ | 14.9 | | | | | | | | | $A^2S$ |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | 75 | | | | | | | | | °C/W |
| Typical Thermal Resistance (Note 1) | $R_{\theta JL}$ | 17 | | | | | | | | | °C/W |
| Typical Junction Capacitance (Note 2) | $C_J$ | 130 | | | | | | | | | 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 | FM220A | FM230A | FM240A | FM250A | FM260A | FM280A | FM2100A | FM2150A | FM2200A | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Instantaneous Forward Voltage at 2.0A DC | | $V_F$ | .50 | | | .70 | | .85 | | | | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | @$T_A$ = 25°C | $I_R$ | 60 | | | | | 5.0 | | | | uA |
| | @$T_A$ = 150°C | | 10 | | | | | 1.0 | | | | mA |
| Maximum Reverse Recovery Time (Note 3) | | trr | 10 | | | | | | | | | nS |

NOTES : 1. Thermal Resistance :Mounted on PCB.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Test Conditions: IF= 0.5A, IR= -1.0A, IRR= -0.25A.

2019-12
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# RATING AND CHARACTERISTICS CURVES (FM220A THRU FM2200A )

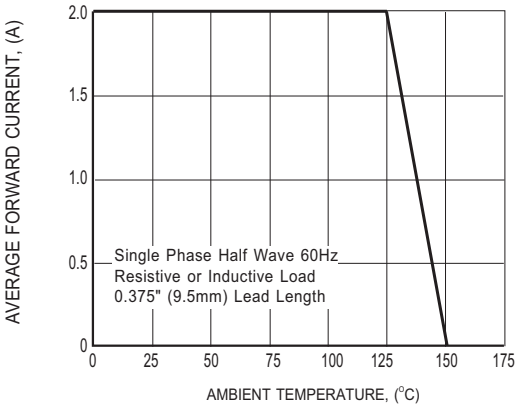



FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

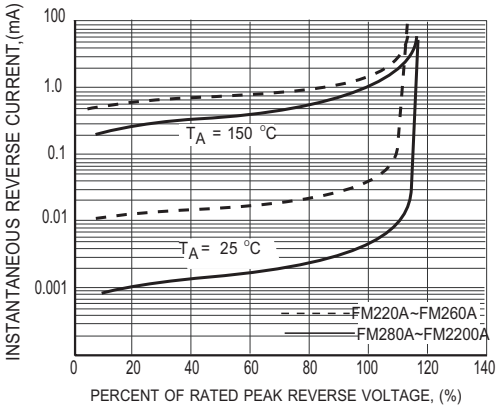



FIG.2 MAXIMUM REVERSE CHARACTERISTICS

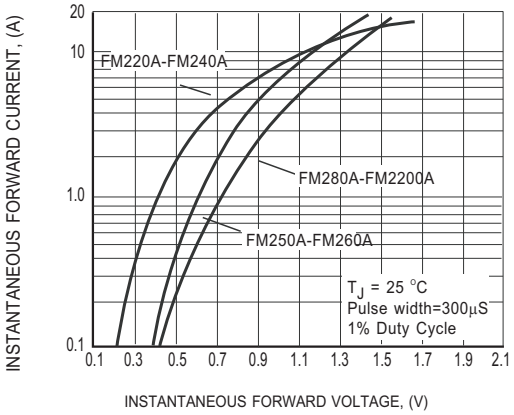



FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

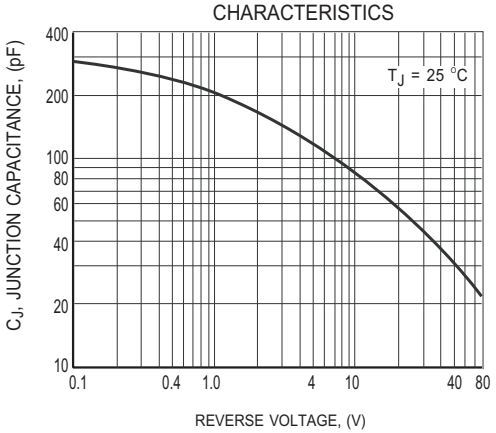



FIG.4 TYPICAL JUNCTION CAPACITANCE

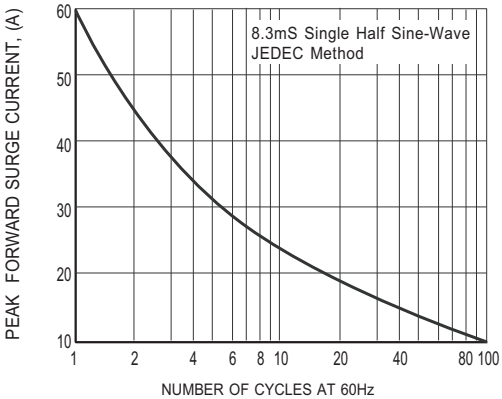
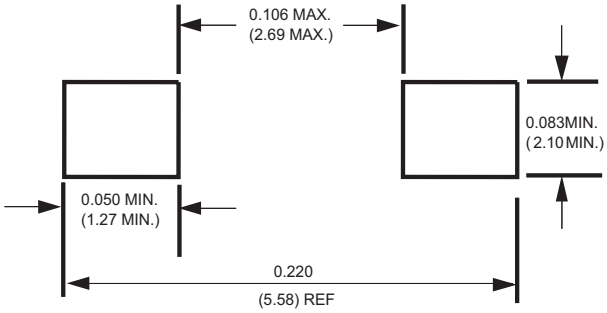



FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

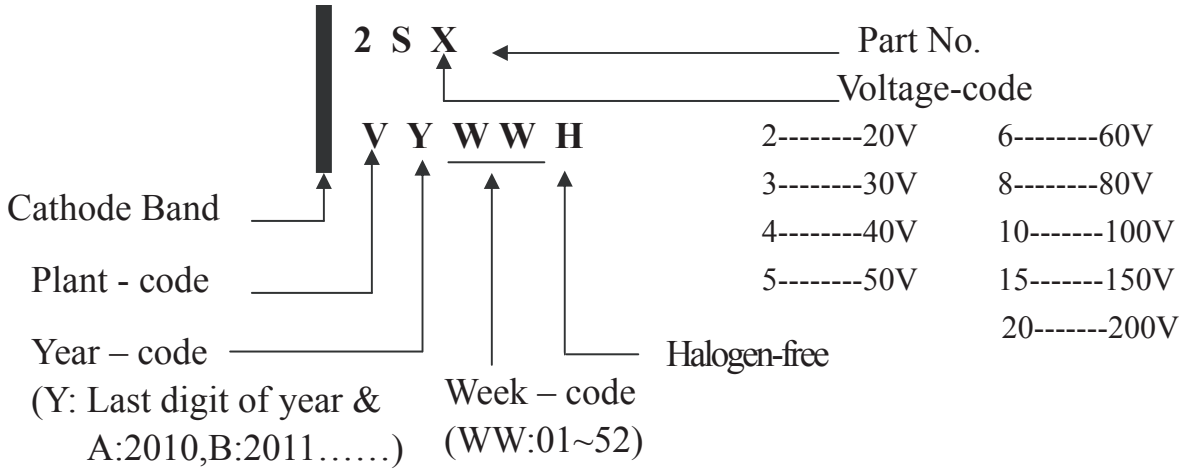
## Mounting Pad Layout




Dimensions in inches and (millimeters)

## 1. Internal Circuit


## 2. Marking on the body



# 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 | -W | 7,500 | 15,000 | --- | --- | 330 | 360*355*360 | 120,000 | 15.2 |

| 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 | 2,000 | 8,000 | --- | --- | 178 | 390*205*310 | 64,000 | 7.8 |