

SUPER LOW Vf SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere

FEATURES

- * Low switching noise
- * Low forward voltage drop
- * High current capability
- * High switching capability
- * High surge capability
- * High reliability

MECHANICAL DATA

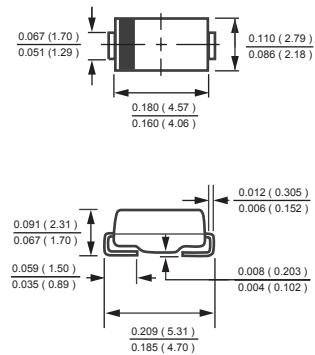
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.09 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



DO-214AC



Dimensions in inches and (millimeters)

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

| RATINGS | SYMBOL | FML120 | FML130 | FML140 | UNITS |
|---|-----------------|--------|--------------|--------|------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | Volts |
| Maximum RMS Voltage | V_{RMS} | 14 | 21 | 28 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | Volts |
| Maximum Average Forward Rectified Current at $T_A=75^{\circ}C$ | 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 | | 110 | | pF |
| Operating Temperature Range | T_J | | 150 | | °C |
| Storage Temperature Range | T_{STG} | | -55 to + 150 | | °C |

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

| CHARACTERISTICS | SYMBOL | FML120 | FML130 | FML140 | UNITS |
|--|------------------------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 1.0A DC | V_F | | .36 | | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | @ $T_A = 25^{\circ}C$ | | 1.0 | | mA |
| | @ $T_A = 150^{\circ}C$ | | 20 | | 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).

2019-01
REV:B

RATING AND CHARACTERISTICS CURVES (FML120 THRU FML140)

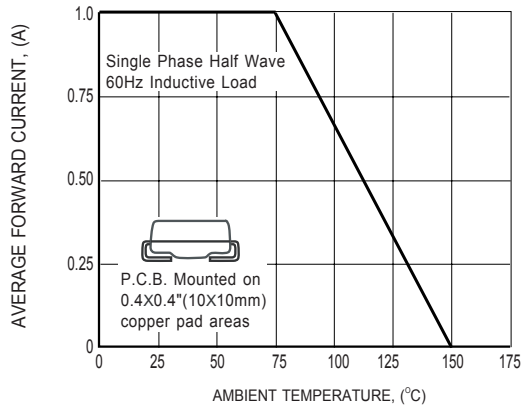


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

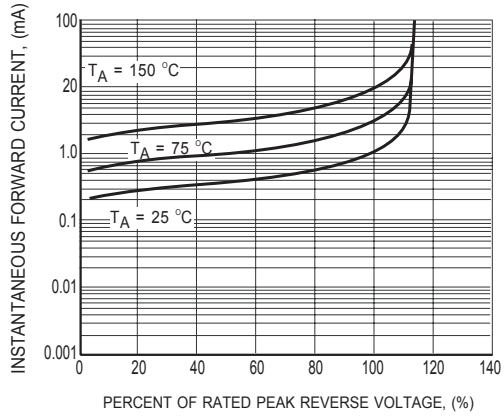


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

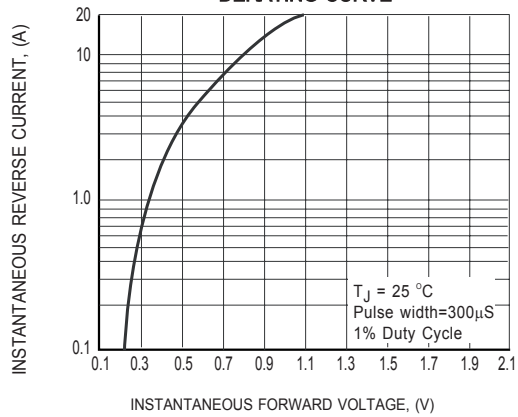


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

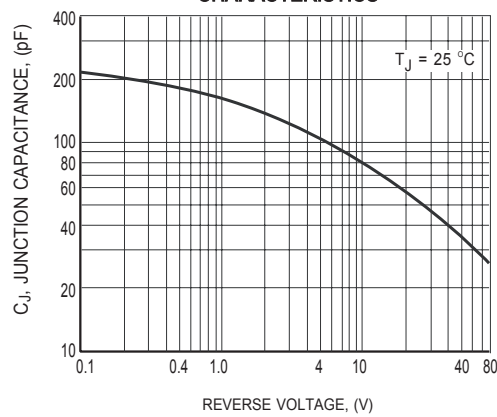


FIG.4 TYPICAL JUNCTION CAPACITANCE

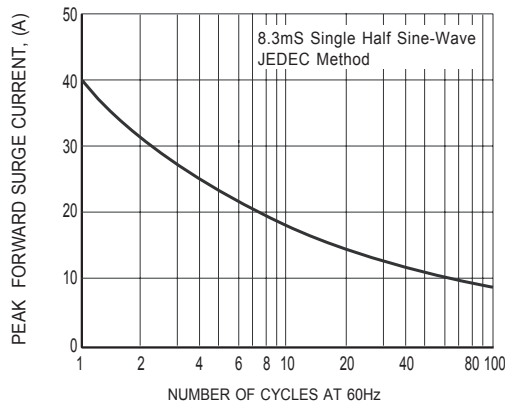
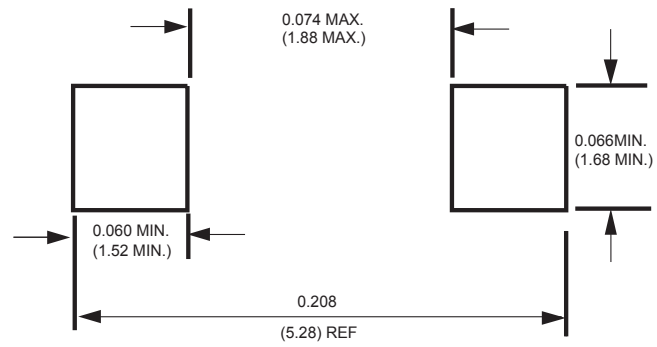


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



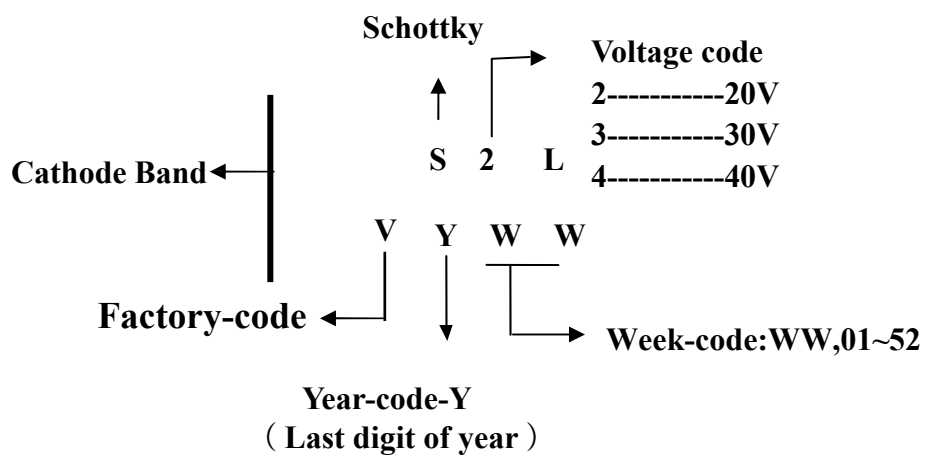
Mounting Pad Layout



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 | -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 |

DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.

