



# Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

TEL: (805) 522-9998 FAX: (805) 522-9989

E-mail: [frontiersales@frontierusa.com](mailto:frontiersales@frontierusa.com)

Web: <http://www.frontierusa.com>

## 1A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

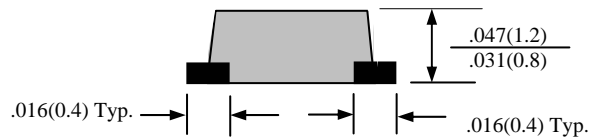
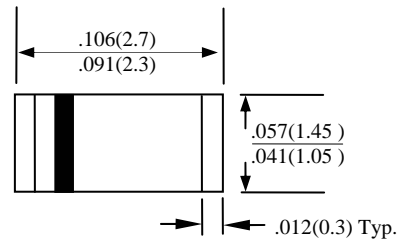
### FM120-N THRU FM160-N

#### FEATURES

- PLASTIC MATERIAL USED CARRIES UNDERWRITERS  
LABORATORY CLASSIFICATION 94 V-0
- FOR SURFACE MOUNTED APPLICATIONS
- EXCEEDS ENVIRONMENTAL STANDARDS OF MIL-S-19500 / 228
- LOW LEAKAGE CURRENT

#### MECHANICAL DATA

- CASE: MOLDED PLASTIC ,JEDEC SOD-323  
DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: SOLDER PLATED, SOLDERABLE PER  
MIL-STD-750,METHOD 2026
- MOUNTING POSITION : ANY
- WEIGHT: 0.0045 GRAMS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%

| RATINGS  | SYMBOL    | FM120-N      | FM130-N | FM140-N | FM150-N | FM160-N | UNITS |
|--|-----------|--------------|---------|---------|---------|---------|-------|
| MAXIMUM RECURRENT PEAK REVERSE VOLTAGE                 | $V_{RRM}$ | 20           | 30      | 40      | 50      | 60      | V     |
| MAXIMUM RMS VOLTAGE                                    | $V_{RMS}$ | 14           | 21      | 28      | 35      | 42      | V     |
| MAXIMUM DC BLOCKING VOLTAGE                            | $V_{DC}$  | 20           | 30      | 40      | 50      | 60      | V     |
| MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT<br>SEE FIG.1 | $I_O$     | 1.0          |         |         |         |         | A     |
| MAXIMUM OVERLOAD SURGE 8.3ms SINGLE HALF SINE-WAVE     | $I_{FSM}$ | 30           |         |         |         |         | A     |
| TYPICAL JUNCTION CAPACITANCE (NOTE 1)                  | $C_J$     | 120          |         |         |         |         | PF    |
| STORAGE TEMPERATURE RANGE                              | $T_{STG}$ | -55 TO + 150 |         |         |         |         | °C    |
| OPERATING TEMPERATURE RANGE                            | $T_{OP}$  | -55 TO + 125 |         |         |         |         | °C    |

#### ELECTRICAL CHARACTERISTICS ( $A_T T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

| CHARACTERISTICS                          | SYMBOL | FM120-N | FM130-N | FM140-N | FM150-N | FM160-N | UNITS |
|--|--------|---------|---------|---------|---------|---------|-------|
| MAXIMUM FORWARD VOLTAGE AT 1.0A AND 25°C | $V_F$  | 0.55    |         |         | 0.70    |         | V     |
| MAXIMUM REVERSE CURRENT AT 25°C          | $I_R$  | 0.5     |         |         |         |         | mA    |
| MARKING                                  |        | 12      | 13      | 14      | 15      | 16      |       |

NOTE: 1. MEASURED AT 1.0 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 V

# RATINGS AND CHARACTERISTIC CURVE FM120-N THRU FM160-N

FIG. 1 - FORWARD CURRENT DERATING CURVE

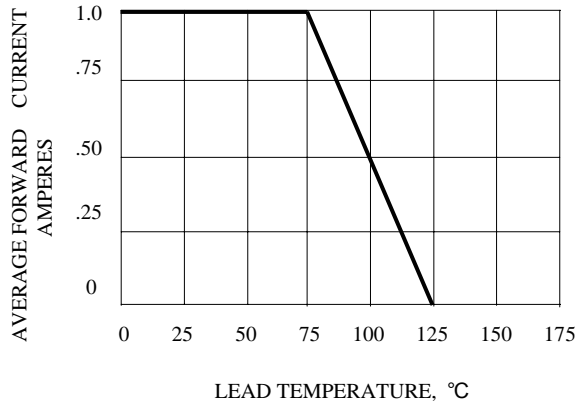


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

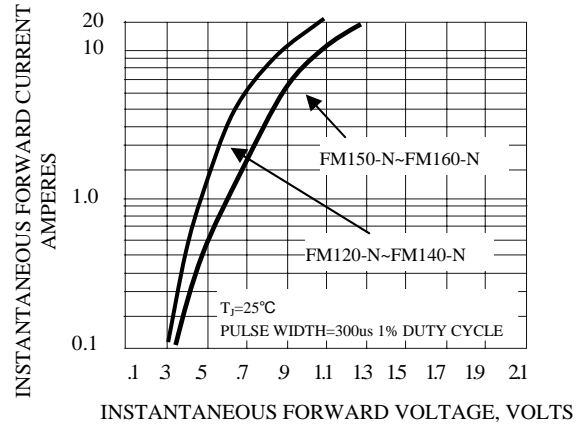


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

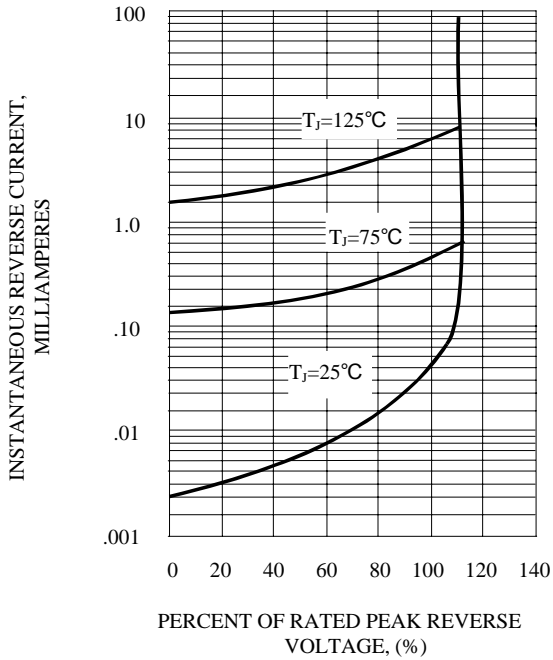


Fig. 4 - MAXIMUM FORWARD SURGE NUMBER OF CYCLES

