RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

# FM5820L THRU FM5822L

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### VOLTAGE RANGE 20 to 40 Volts CURRENT 3.0 Ampere

NEW RELEASE

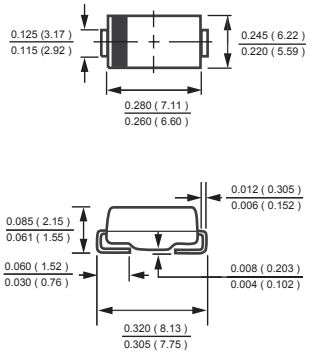
**FEATURES**

* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.24 gram

**MECHANICAL DATA**

* Epoxy: Device has UL flammability classification 94V-O

SMCL




Dimensions in inches and (millimeters)

**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%.

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

| RATINGS | SYMBOL | FM5820L | FM5821L | FM5822L | 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 Derating Lead Temperature | $I_O$ | 3.0 | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 80 | | | Amps |
| Typical Thermal Resistance (Note 3) | $R_{\theta JA}$ | 50 | | | °C/W |
| | $R_{\theta JL}$ | 14 | | | |
| Typical Junction Capacitance (Note 1) | $C_J$ | 200 | | | 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 | FM5820L | FM5821L | FM5822L | UNITS |
|---|---|---|---|---|---|---|
| Maximum Instantaneous Forward Voltage at 3.0A DC | | $V_F$ | .475 | .500 | .525 | Volts |
| Maximum Average Reverse Current | @$T_A$ = 25°C | $I_R$ | 0.2 | | | mAmps |
| at Rated DC Blocking Voltage | @$T_A$ = 100°C | | 10 | | | mAmps |

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
3. Thermal Resistance : Mounted on PCB.

2006-11

# RATING AND CHARACTERISTICS CURVES ( FM5820L THRU FM5822L )

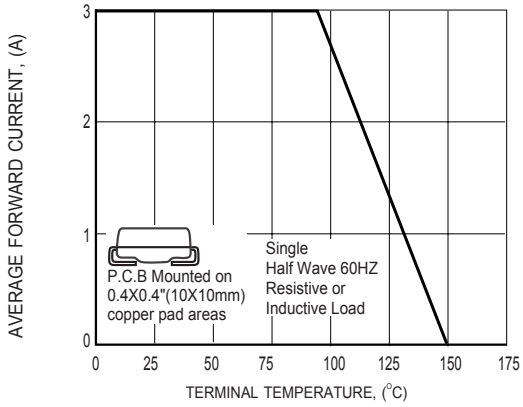



FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

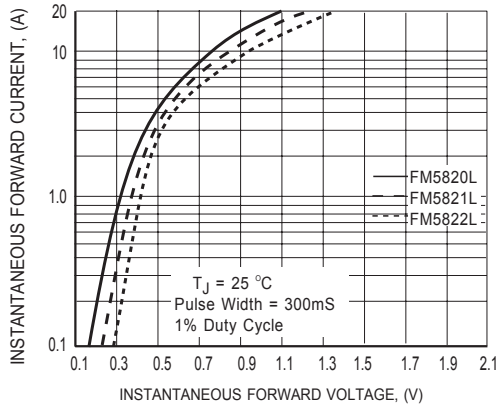



FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

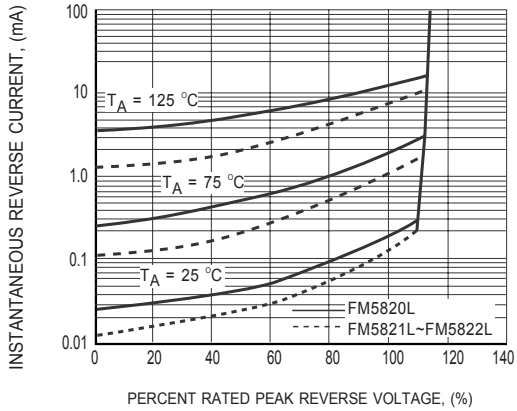



FIG.3 TYPICAL REVERSE CHARACTERISTICS

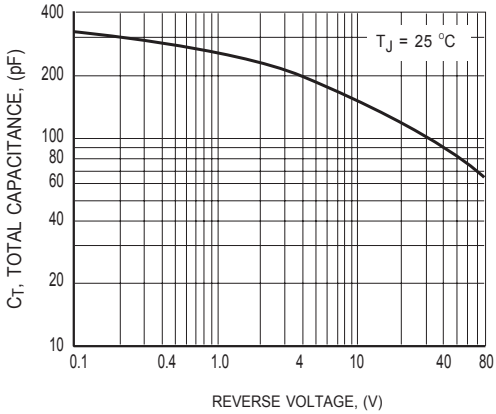



FIG.4 TYPICAL JUNCTION CAPACITANCE

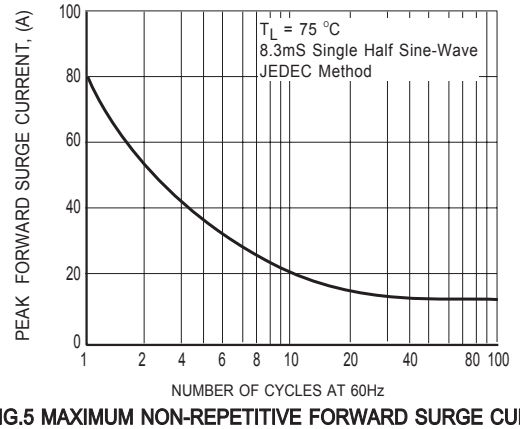
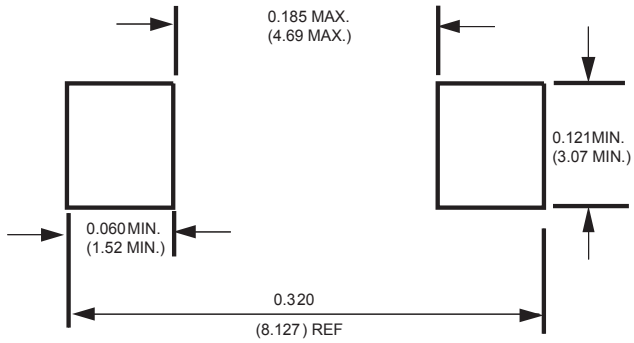



FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

# Mounting Pad Layout




Dimensions in inches and (millimeters)

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