

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Lead less chip form, no lead damage
- Lead-free solder joint, no wire bond & lead frame
- Low power loss, high efficiency
- High current capability, low  $V_F$
- Plastic package has underwriters laboratory flammability Classification 94V-0

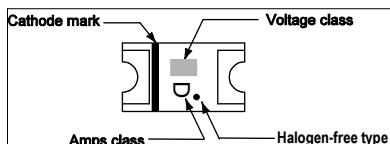
## APPLICATION

- Switching mode power supply applications
- Portable equipment battery applications
- High frequency rectification
- DC / DC converter
- Telecommunication

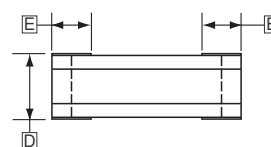
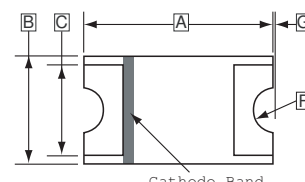
## MECHANICAL DATA

- Case: Packed with FRP substrate and epoxy underfilled
- Terminals: Pure tin-plated (lead-free), solderable per MIL-STD-750, method 2026.
- Polarity: Laser cathode band marking
- Weight : 0.003 gram

## MARKING



0603



| REF. | Millimeter |      | REF. | Millimeter |      |
|------|------------|------|------|------------|------|
|      | Min.       | Max. |      | Min.       | Max. |
| A    | 1.50       | 1.70 | E    | 0.30       | 0.40 |
| B    | 0.80       | 1.00 | F    | R 0.20     |      |
| C    | 0.70 TYP.  |      | G    | 0.05 REF.  |      |
| D    | 0.50       | 0.80 |      |            |      |

## ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| PARAMETER                         | SYMBOL                              | VALUE     |         | UNIT | TEST CONDITION          |
|-----------------------------------|-------------------------------------|-----------|---------|------|-------------------------|
|                                   |                                     | UMMD022   | UMMD024 |      |                         |
| Repetitive Peak Reverse Voltage   | V <sub>RRM</sub>                    | 20        | 40      | V    |                         |
| Average Forward Current           | I <sub>F(AV)</sub>                  | 200       |         | mA   |                         |
| Peak Forward Surge Current        | I <sub>FSM</sub>                    | 2.0       |         | A    | @ 8.3 ms half sine-wave |
| Junction Temperature              | T <sub>J</sub>                      | 125       |         | ℃    |                         |
| Operating and Storage Temperature | T <sub>OPR</sub> , T <sub>STG</sub> | -40 ~ 125 |         |      |                         |

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| TYPE NUMBER                                     | SYMBOL          | MIN | TYP  | MAX  | UNIT                        | TEST CONDITION                                       |
|-------------------------------------------------|-----------------|-----|------|------|-----------------------------|------------------------------------------------------|
| Forward Voltage                                 | $V_F$           | -   | 0.30 | -    | V                           | $I_F = 50\text{mA}$                                  |
|                                                 |                 | -   | 0.40 | -    |                             | $I_F = 100\text{mA}$                                 |
|                                                 |                 | -   | 0.43 | 0.45 |                             | $I_F = 200\text{mA}$                                 |
| Repetitive Peak Reverse Current                 | $I_{RRM}$       | -   | 1.5  | 30   | $\mu\text{A}$               | $V_R = 10\text{V}, T_A = 25^\circ\text{C}$           |
|                                                 |                 | -   | 8    | 50   |                             | $V_R = \text{Max. } V_{RRM}, T_A = 25^\circ\text{C}$ |
| Junction capacitance                            | $C_J$           | -   | 35   | -    | pF                          | $V_R = 4\text{V}, f = 1.0\text{ MHz}$                |
| Typical Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | -   | 160  | -    | $^\circ\text{C} / \text{W}$ |                                                      |
| Typical Thermal Resistance, Junction to Lead    | $R_{\theta JL}$ | -   | 110  | -    |                             |                                                      |

## RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT  
DERATING CURVE

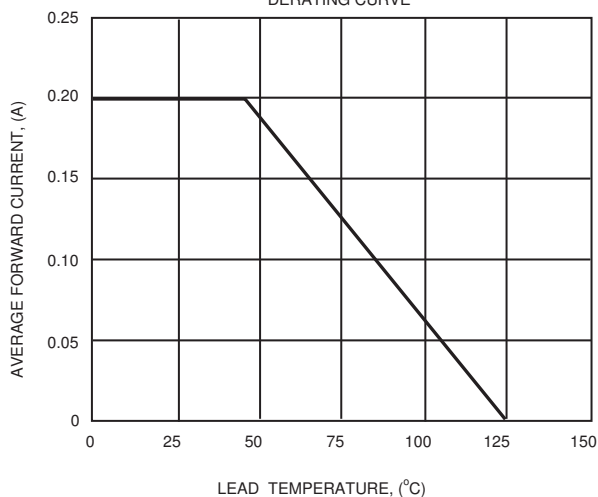


FIG.2 - MAXIMUM NON-REPETITIVE  
PEAK FORWARD SURGE CURRENT

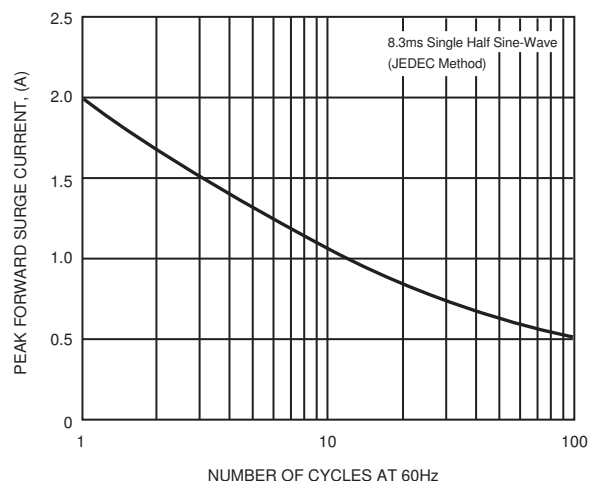


FIG.3 - TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

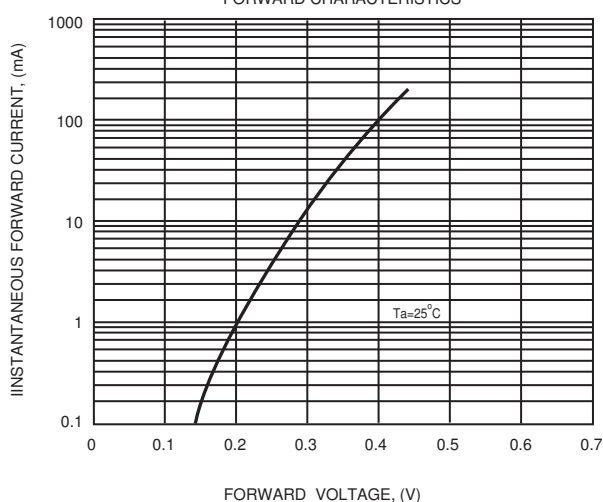


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

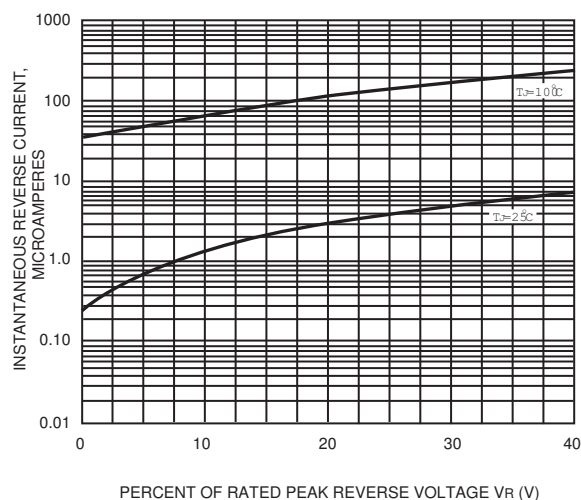


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

