

## RA501GP THRU RA507GP

### Features

- Lead Free Finish/RoHS Compliant (Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification 94V-0 and MSL Rating 1
- Low Cost Construction Utilizing Void-free Molded Plastic Technique
- High Surge Capability, Glass Passivated Chip
- Diffused Junction

### Maximum Ratings

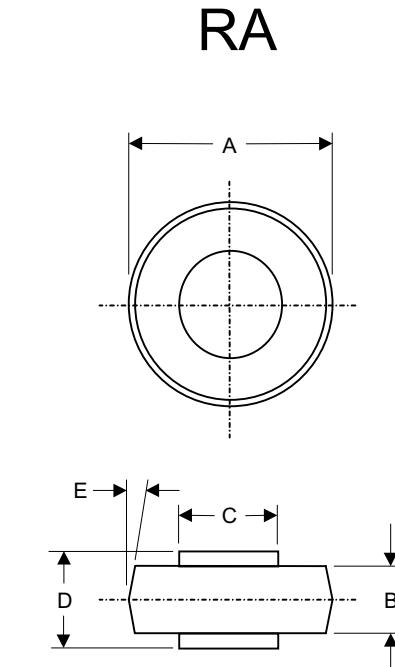
- Operating & Storage Temperature: -55°C to +150°C
- For Capacitive Load, Derate Current by 20%

| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|--|---------------------|-----------------------------|
| RA501GP         | 50V                                    | 35V                 | 50V                         |
| RA502GP         | 100V                                   | 70V                 | 100V                        |
| RA503GP         | 200V                                   | 140V                | 200V                        |
| RA504GP         | 400V                                   | 280V                | 400V                        |
| RA505GP         | 600V                                   | 420V                | 600V                        |
| RA506GP         | 800V                                   | 560V                | 800V                        |
| RA507GP         | 1000V                                  | 700V                | 1000V                       |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |       |  |
|---|-------------|-------|--|
| Average Forward Current                                 | $I_{F(AV)}$ | 50.0A | $T_c=125^\circ C$                              |
| Peak Forward Surge Current                              | $I_{FSM}$   | 500A  | 8.3ms half sine                                |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | 1.1V  | $I_{FM}=50.0A$<br>$T_A=25^\circ C$             |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5.0uA | $T_c=25^\circ C$                               |
| Typical Reverse Recovery Times                          | $t_{rr}$    | 3.0us | $I_F=0.5A$ ,<br>$I_R=1.0A$ ,<br>$I_{rr}=0.25A$ |
| Typical Junction Capacitance                            | $C_j$       | 300pF | Measured at 1.0MHz,<br>$V_R=4.0V$              |

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7.



| DIM | DIMENSION |      |       |       | NOTE |
|-----|-----------|------|-------|-------|------|
|     | INCHES    | MM   | MIN   | MAX   |      |
| A   | .380      | .410 | 9.70  | 10.40 |      |
| B   | .165      | .185 | 4.19  | 4.70  |      |
| C   | .215      | .225 | 5.50  | 5.70  |      |
| D   | .235      | .250 | 6.00  | 6.40  |      |
| E   | -----     | 5°   | ----- | 5°    | NOM  |

# RA501GP thru RA507GP

## RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

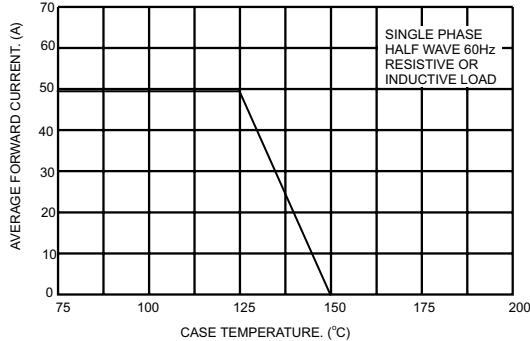


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

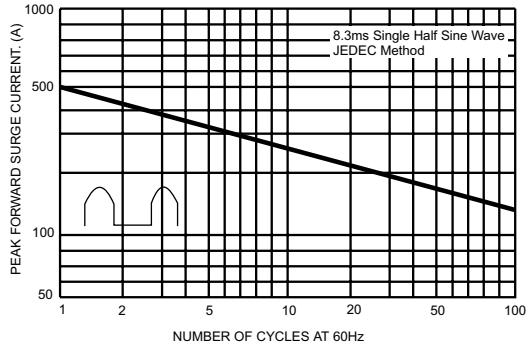


FIG.3- TYPICAL FORWARD CHARACTERISTICS

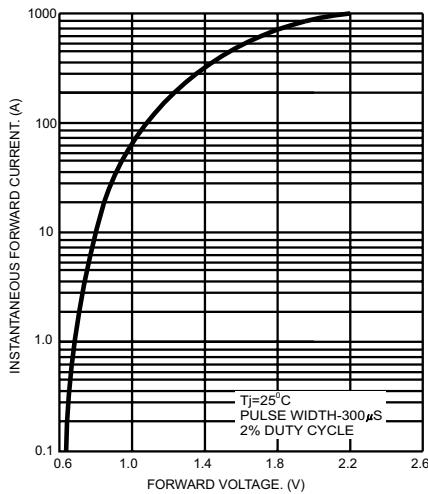


FIG.4- TYPICAL REVERSE CHARACTERISTICS

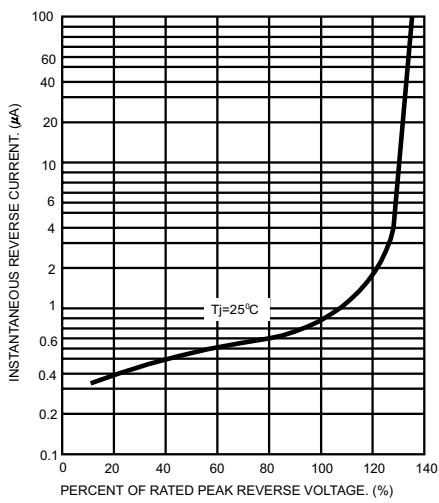
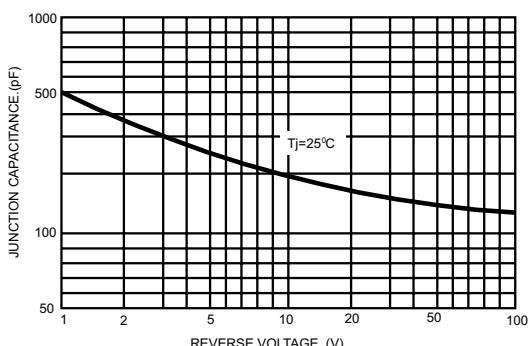


FIG.5- TYPICAL JUNCTION CAPACITANCE



<sup>TM</sup>

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## Ordering Information

| Device           | Packing        |
|------------------|----------------|
| (Part Number)-BP | Bulk;1Kpcs/Box |

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