

## EM513GP THRU EM518GP

### Features

- Halogen free available upon request by adding suffix "-HF"
- High reverse voltage
- Low reverse leakage
- High forward surge current capability.
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix designates Compliant. See ordering information)
- Glass passivated chip for high reliability
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

### Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------------------------------|---------------------|-----------------------------|
| EM513GP         | 1600V                                  | 1120V               | 1600V                       |
| EM516GP         | 1800V                                  | 1260V               | 1800V                       |
| EM518GP         | 2000V                                  | 1400V               | 2000V                       |

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

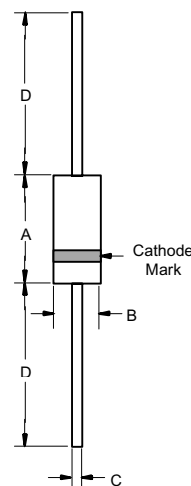
|                                                         |            |             |                                                       |
|---------------------------------------------------------|------------|-------------|-------------------------------------------------------|
| Average Forward Current                                 | $I_O$      | 1.0A        | .375" (9.5mm) Lead Length $T_A = 55^\circ\text{C}$    |
| Peak Forward Surge Current                              | $I_{FSM}$  | 25A         | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                   | $V_F$      | 1.25V       | $I_{FM} = 1.0A$ ;<br>$T_J = 25^\circ\text{C}$         |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$      | 5μA<br>50μA | $T_J = 25^\circ\text{C}$<br>$T_J = 100^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$      | 15pF        | Measured at 1.0MHz, $V_R=4.0V$                        |
| Typical Thermal Resistance                              | $R_{thja}$ | 50°C/W      | (Note 1)                                              |

Note 1: Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, P.C. board mounted.

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

## 1.0 Amp General Purpose Plastic Rectifier 1600 to 2000 Volts

DO-41



| DIM | INCHES |      | MM    |      | NOTE |
|-----|--------|------|-------|------|------|
|     | MIN    | MAX  | MIN   | MAX  |      |
| A   | .166   | .205 | 4.10  | 5.20 |      |
| B   | .080   | .107 | 2.00  | 2.70 |      |
| C   | .028   | .034 | .70   | .90  |      |
| D   | 1.000  | ---  | 25.40 | ---  |      |

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FIG.1-TYPICAL FORWARD CURRENT  
DERATING CURVE

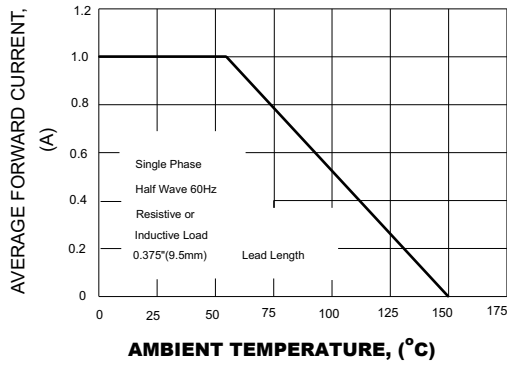


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT

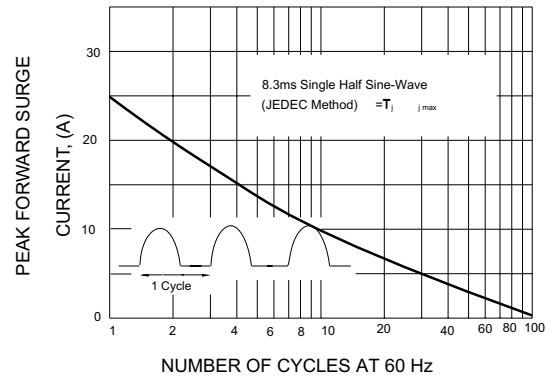


FIG.3-TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

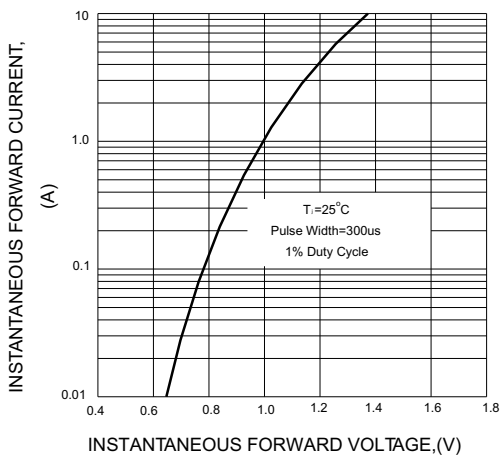


FIG.4-TYPICAL REVERSE  
CHARACTERISTICS

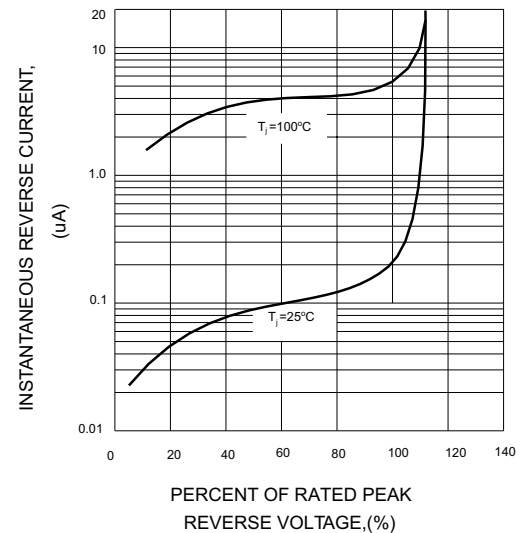
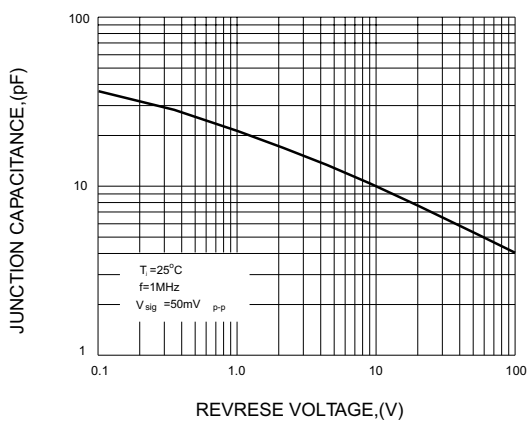


FIG.5-TYPICAL JUNCTION CAPACITANCE



## Ordering Information :

| Device         | Packing                    |
|----------------|----------------------------|
| Part Number-TP | Tape&Reel:5Kpcs/Reel       |
| Part Number-AP | Ammo Packing:5Kpcs/AmmoBox |
| Part Number-BP | Bulk: 50Kpcs/Carton        |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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