



Micro Commercial Components



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# ER1A-L THRU ER1J-L

## Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Built-in strain relief
- Super fast switching speed under 35ns
- Marking : Cathode band and type number (No '-L' Suffix)

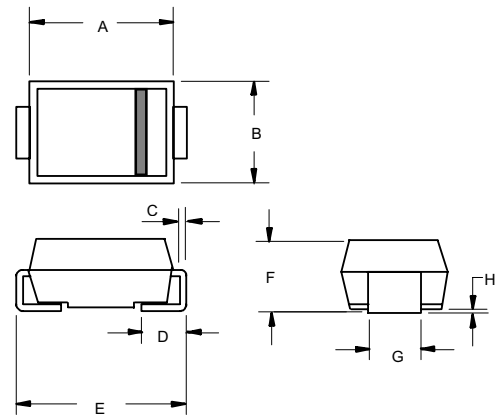
**1 Amp Super Fast  
Recovery Rectifier  
50 to 600 Volts**

## Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C

| MCC Part Number | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|--|---------------------|-----------------------------|
| ER1A-L          | 50V                                    | 35V                 | 50V                         |
| ER1B-L          | 100V                                   | 70V                 | 100V                        |
| ER1D-L          | 200V                                   | 140V                | 200V                        |
| ER1G-L          | 400V                                   | 280V                | 400V                        |
| ER1J-L          | 600V                                   | 420V                | 600V                        |

## DO-214AA (SMB) (LEAD FRAME)

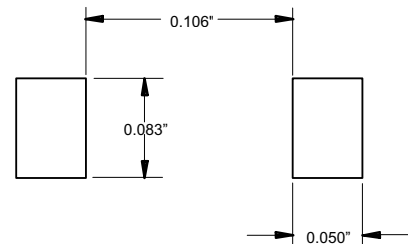


## Electrical Characteristics @ 25°C Unless Otherwise Specified

|  |             |                                     |   |
|--|-------------|-------------------------------------|---|
| Average Forward Current  | $I_{F(AV)}$ | 1.0A                                | $T_A = 55^\circ\text{C}$                                |
| Peak Forward Surge Current   | $I_{FSM}$   | 30A                                 | 8.3ms, half sine  |
| Maximum Instantaneous Forward Voltage<br>ER1A-L-ER1D-L<br>ER1G-L<br>ER1J-L | $V_F$       | .95V<br>1.25V<br>1.70V              | $I_{FM} = 1.0\text{A};$                                 |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                    | $I_R$       | 5 $\mu\text{A}$<br>80 $\mu\text{A}$ | $T_A = 25^\circ\text{C}$<br>$T_A = 100^\circ\text{C}$   |
| Maximum Reverse Recovery Time  | $T_{rr}$    | 35ns                                | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ |
| Typical Junction Capacitance   | $C_J$       | 15pF                                | Measured at 1.0MHz, $V_R=4.0\text{V}$                   |

| DIM | DIMENSIONS |      |      |       | NOTE |
|-----|------------|------|------|-------|------|
|     | INCHES     |      | MM   |       |      |
|     | MIN        | MAX  | MIN  | MAX   |      |
| A   | .160       | .185 | 4.06 | 4.70  |      |
| B   | .130       | .155 | 3.30 | 3.94  |      |
| C   | .006       | .012 | 0.15 | 0.31  |      |
| D   | .030       | .060 | 0.76 | 1.52  |      |
| E   | .200       | .220 | 5.08 | 5.59  |      |
| F   | .079       | .096 | 2.00 | 2.44  |      |
| G   | .075       | .087 | 1.91 | 2.21  |      |
| H   | .002       | .008 | 0.05 | 0.203 |      |

## SUGGESTED SOLDER PAD LAYOUT



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

FIG.1-TYPICAL FORWARD CHARACTERISTICS

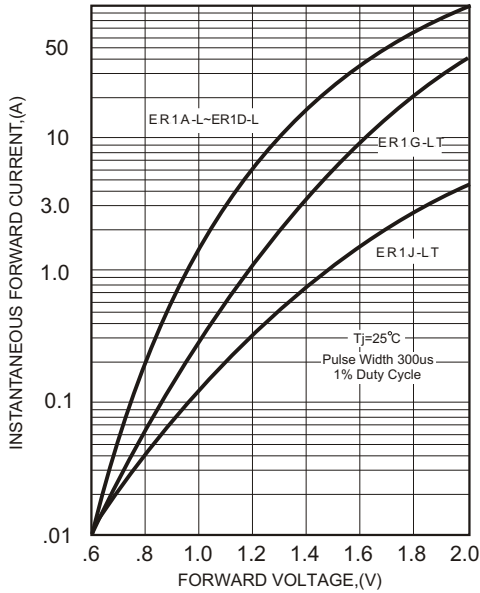


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

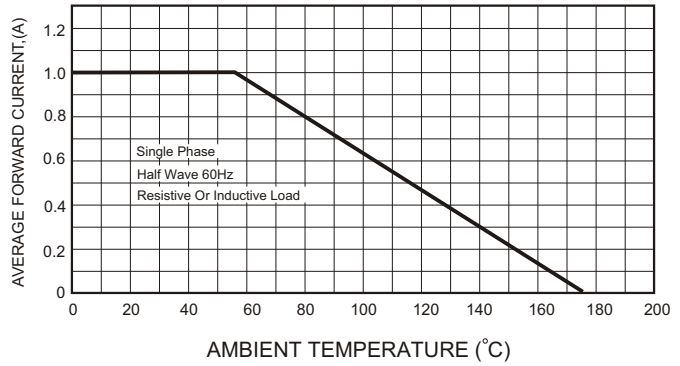
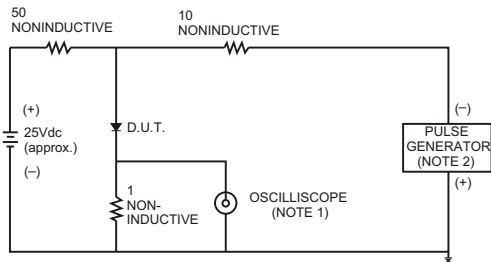


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

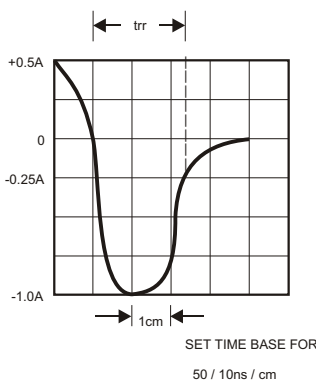


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

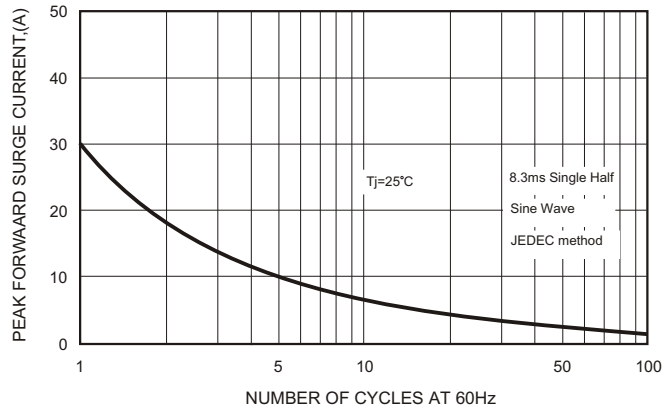
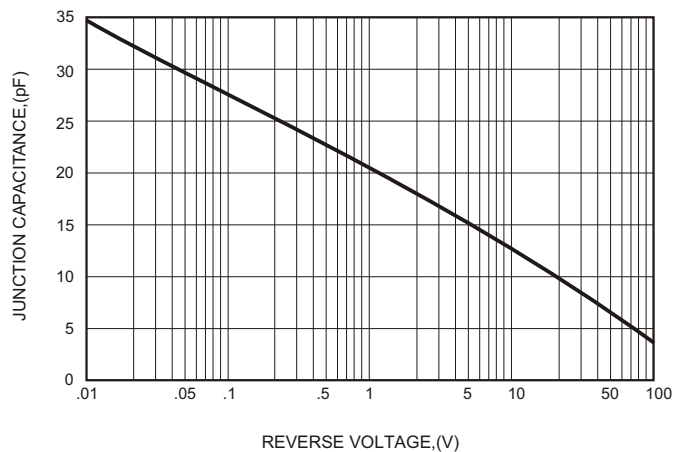


FIG.5-TYPICAL JUNCTION CAPACITANCE





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Ordering Information :

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

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