



Micro Commercial Components  
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# ER1Q THRU ER1ZZ

## Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- High Temp Soldering: 250°C for 10 Seconds At Terminals
- Super Fast Recovery Times For High Efficiency
- Gull Wing Lead Bend To Prevent Arcing
- Perfect For Ballast, Television And Monitor Applications

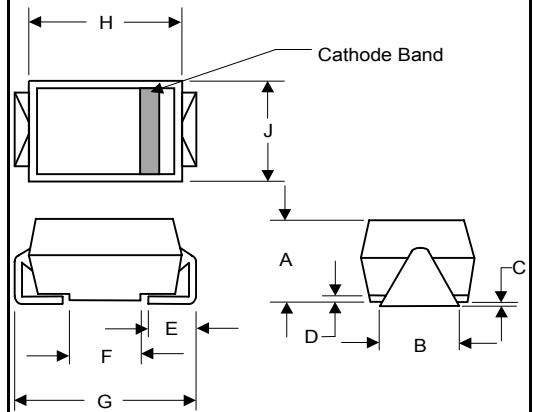
## 1 Amp Super Fast Recovery Silicon Rectifier 1200 to 2000 Volts

## Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| ER1Q            | ER1Q           | 1200V                                  | 840V                | 1200V                       |
| ER1V            | ER1V           | 1400V                                  | 980V                | 1400V                       |
| ER1Y            | ER1Y           | 1600V                                  | 1120V               | 1600V                       |
| ER1Z            | ER1Z           | 1800V                                  | 1260V               | 1800V                       |
| ER1ZZ           | ER1ZZ          | 2000V                                  | 1400V               | 2000V                       |

## DO-214AA (SMBJ) (Round Lead)



## Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |                                      |   |
|---|-------------|--------------------------------------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 1.0A                                 | $T_J = 55^\circ\text{C}$                              |
| Peak Forward Surge Current                              | $I_{FSM}$   | 30A                                  | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | ER1Q-ER1V: 1.85V<br>ER1Y-ER1ZZ: 2.0V | $I_{FM} = 1.0A$ ;<br>$T_J = 25^\circ\text{C}^*$       |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 5 $\mu\text{A}$<br>30 $\mu\text{A}$  | $T_J = 25^\circ\text{C}$<br>$T_J = 125^\circ\text{C}$ |
| Maximum Reverse Recovery Time                           | $T_{rr}$    | 150ns<br>300ns                       | $I_F=0.5A$ , $I_R=1.0A$ ,<br>$I_{rr}=0.25A$           |
| Typical Junction Capacitance                            | $C_J$       | 45pF                                 | Measured at 1.0MHz, $V_R=4.0V$                        |

\*Pulse test: Pulse width 200  $\mu\text{sec}$ , Duty cycle 2%

| DIM | INCHES |      | MM   |      | NOTE |
|-----|--------|------|------|------|------|
|     | MIN    | MAX  | MIN  | MAX  |      |
| A   | .078   | .116 | 1.98 | 2.95 |      |
| B   | .075   | .089 | 1.90 | 2.25 |      |
| C   | .002   | .008 | .05  | .20  |      |
| D   | ---    | .02  | ---  | .51  |      |
| E   | .035   | .055 | .90  | 1.40 |      |
| F   | .065   | .091 | 1.65 | 2.32 |      |
| G   | .205   | .224 | 5.21 | 5.69 |      |
| H   | .160   | .180 | 4.06 | 4.57 |      |
| J   | .130   | .155 | 3.30 | 3.94 |      |

## SUGGESTED SOLDER PAD LAYOUT

