

## DUAL ULTRAFAST POWER RECTIFIER

Qualified per MIL-PRF-19500/616

### DEVICES

|               |                |
|---------------|----------------|
| <b>1N6657</b> | <b>1N6657R</b> |
| <b>1N6658</b> | <b>1N6658R</b> |
| <b>1N6659</b> | <b>1N6659R</b> |

### LEVELS

**JAN**  
**JANTX**  
**JANTXV**

### ABSOLUTE MAXIMUM RATINGS ( $T_C = +25^\circ\text{C}$ unless otherwise noted) (Per Diode)

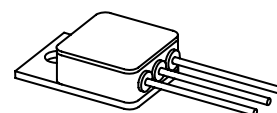
| Parameters / Test Conditions                                           | Symbol          | Value             | Unit               |
|------------------------------------------------------------------------|-----------------|-------------------|--------------------|
| Peak Repetitive Reverse Voltage<br>1N6657, R<br>1N6658, R<br>1N6659, R | $V_{RWM}$       | 100<br>150<br>200 | Vdc                |
| Average Forward Current <sup>(1)</sup><br>$T_C = +100^\circ\text{C}$   | $I_F$           | 15                | Adc                |
| Peak Surge Forward Current                                             | $I_{FSM}$       | 150               | A(pk)              |
| Thermal Resistance - Junction to Case                                  | $R_{\theta jc}$ | 2.3               | $^\circ\text{C/W}$ |

#### Note:

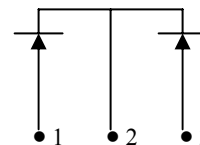
- (1) Derate @ 300mA/ $^\circ\text{C}$  above  $T_C = 100^\circ\text{C}$
- (2) Pulse Test; 300 $\mu\text{s}$ , duty cycle  $\leq 2\%$

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

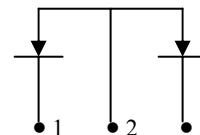
| Parameters / Test Conditions                                                                                                                                                                                               | Symbol               | Min.              | Max.       | Unit            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------|------------|-----------------|
| <b>OFF CHARACTERISTICS</b>                                                                                                                                                                                                 |                      |                   |            |                 |
| Breakdown Voltage <sup>(2)</sup><br>$I_R = 500\mu\text{Adc}$<br>1N6657, R<br>1N6658, R<br>1N6659, R                                                                                                                        | $V_{BR}$             | 100<br>150<br>200 |            | Vdc             |
| Forward Voltage <sup>(2)</sup><br>$I_F = 10\text{Adc}$<br>$I_F = 20\text{Adc}$                                                                                                                                             | $V_{F1}$<br>$V_{F2}$ |                   | 1.0<br>1.2 | Vdc             |
| Reverse Leakage Current <sup>(2)</sup><br>$V_R = 100\text{V}$<br>$V_R = 150\text{V}$<br>$V_R = 200\text{V}$<br>1N6657, R<br>1N6658, R<br>1N6659, R                                                                         | $I_{R1}$             |                   | 10         | $\mu\text{Adc}$ |
| Reverse Leakage Current<br>$V_R = 100\text{V}$ , $T_C = +100^\circ\text{C}$<br>$V_R = 150\text{V}$ , $T_C = +100^\circ\text{C}$<br>$V_R = 200\text{V}$ , $T_C = +100^\circ\text{C}$<br>1N6657, R<br>1N6658, R<br>1N6659, R | $I_{R2}$             |                   | 1.0        | mAdc            |
| Reverse Recovery Time<br>$I_F = 1.0\text{A}$ , $I_R = 1\text{A}$ , $I_{RR} = 100\text{mA}$                                                                                                                                 | $t_{rr}$             |                   | 35         | nS              |
| Junction Capacitance<br>$V_R = 10\text{Vdc}$ , $f = 1.0\text{MHz}$ , $V_{SIG} = 50\text{mV(p-p)}$ max                                                                                                                      | $C_J$                |                   | 150        | pF              |



TO-254



1N6657, 1N6658, 1N6659



1N6657R, 1N6658R, 1N6659R