

HERMETIC SCHOTTKY RECTIFIERS

4 Amp, 45 Volts

1N6492, J1X, J1XV

T-03-17

2

FEATURES

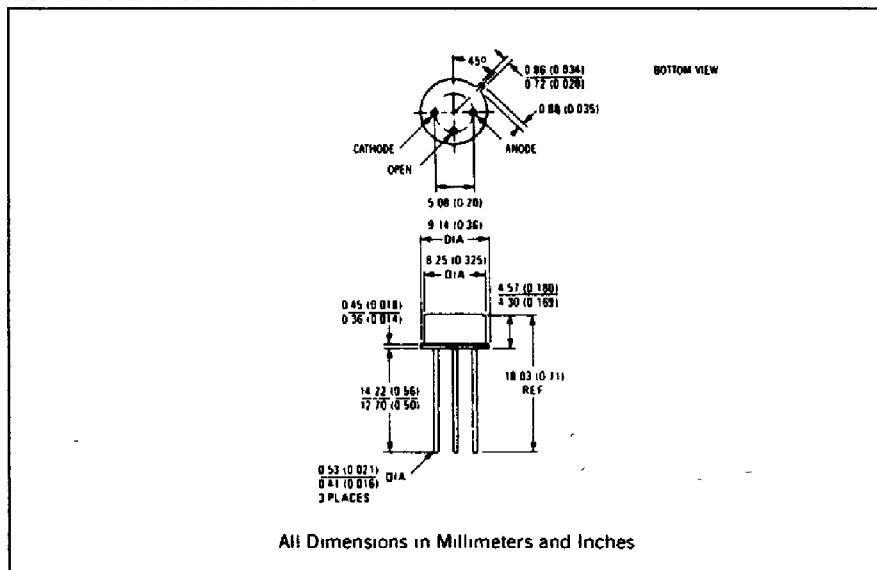
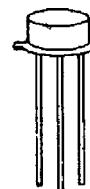
- Qualified to MIL-S-19500/567
- Extremely Low V_F and I_R
- High Surge Capability
- Low Recovered Charge
- Rugged Hermetic Package, No Pressure Contacts

DESCRIPTION

The 1N6492 hermetic Schottky rectifier is ideally suited for output rectifiers and catch diodes in high efficiency, low voltage, high reliability switching power supplies.

ABSOLUTE MAXIMUM RATINGS

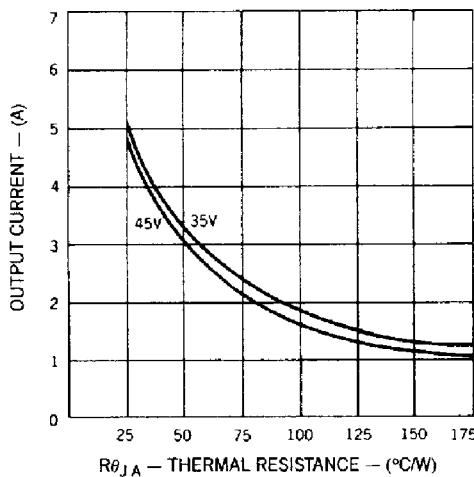
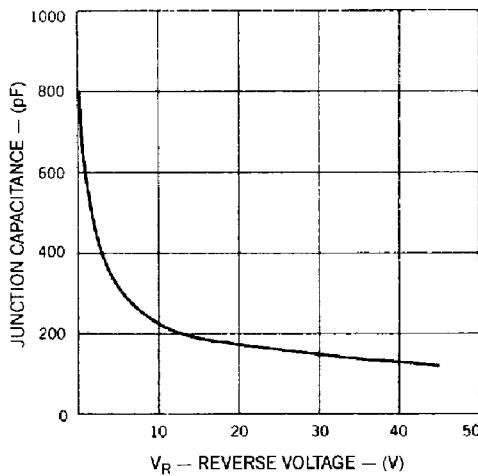
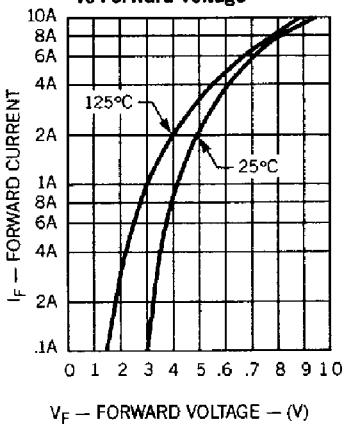
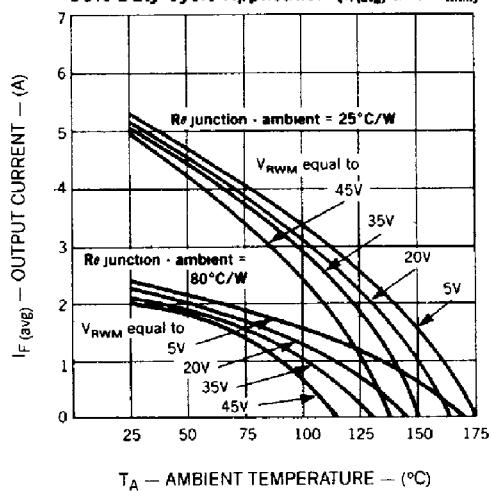
| | |
|--|-----------------|
| Peak Repetitive Reverse Voltage, V_{RRM} | 45V |
| Working Peak Reverse Voltage, V_{RWM} | 45V |
| DC Blocking Voltage, V_r | 45V |
| Non-Repetitive Peak Reverse Voltage, V_{RSM} | 54V |
| Average Forward Current (50% Duty Cycle), $I_{F(AV)}$, $T_A = 25^\circ\text{C}$ | 1.2A |
| Average Forward Current (50% Duty Cycle), $I_{F(AV)}$ | .4A |
| $T_{CASE} = 100^\circ\text{C}$ | |
| $V_{RWM} = 45V$ | |
| Non-Repetitive Peak Surge Current, I_{FSM} | 80A |
| 8.3ms, Half Sine Wave | |
| Operating and Storage Junction Temperature Range | -65°C to +175°C |
| Thermal Resistance, Junction to Ambient, $R_{\theta J-A}$ | 175°C/W |
| Thermal Resistance, Junction to Case, $R_{\theta J-C}$ | 12°C/W |

MECHANICAL SPECIFICATIONS**TO-205AF (TO-39)**

**SEMICONDUCTOR
PRODUCTS**
UNITRODE

ELECTRICAL CHARACTERISTICS (at $T_A = 25^\circ\text{C}$ unless noted)

| CHARACTERISTICS | SYMBOL | LIMIT | UNITS | CONDITIONS |
|---------------------------------|--|--------------------------------------|---------------------------|--|
| Maximum Reverse Leakage Current | I_{RM1} I_{RM2} I_{RM3} I_{RM4} | 2.0 20 200 20 2.0 | mA mA mA mA A | $V_{RM} = 45\text{V}$ ¹ $V_{RM} = 45\text{V}, T_A = 125^\circ\text{C}$ $V_{RM} = 45\text{V}, T_A = 175^\circ\text{C}$ $V_{RM} = 45\text{V}, T_A = -55^\circ\text{C}$ $V_{RSM} = 54\text{V}$ |
| Maximum Forward Voltage | V_{FM1} V_{FM2} V_{FM3} V_{FM4} | 0.92 0.68 0.56 0.63 0.48 | V V V V V | $I_{FM} = 8\text{A}$ (pk) ^{1,2} $I_{FM} = 4\text{A}$ (pk) $I_{FM} = 2\text{A}$ (pk) $I_{FM} = 2\text{A}$ (pk), $T_A = -55^\circ\text{C}$ $I_{FM} = 1\text{A}$ (pk) |
| Capacitance | C_T | 450 | pf | $V_R = 5\text{V}$ |
| Surge Current | I_{SURGE} | | | $I_{FSM} = 80\text{A}$ (pk) $V_{RM} = 45\text{V}$ (pk) $I_O = 0.75\text{A}$ 10 surges of 8.3mSec at 1 minute intervals |

¹ Pulse width = 400μSec, duty cycle = 1%² Measured with anode and cathode lead length of 0.2" from caseOutput Current vs R_{QJA}
 $T_{\text{ambient}} = 25^\circ\text{C}$, 50% Duty CycleTypical Junction Capacitance
vs Reverse VoltageTypical Forward Current
vs Forward VoltageOutput Current vs Ambient Temperature
50% Duty Cycle Application ($I_{F(\text{avg})}$ and V_{RWM})Typical Reverse Current
vs Reverse Voltage