HERMETIC SCHOTTKY RECTIFIERS

4 Amp, 45 Volts

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

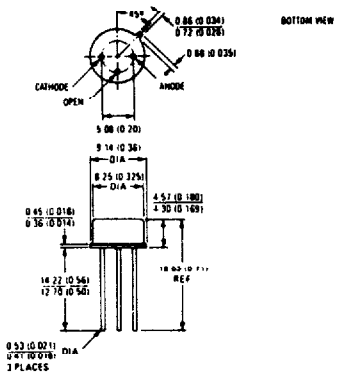
DESCRIPTION

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

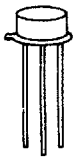
Peak Repetitive Reverse Voltage, V_{RRM} 45V
Working Peak Reverse Voltage, V_{RWM} 45V
DC Blocking Voltage, V_R 45V
Non-Repetitive Peak Reverse Voltage, V_{RSM} 54V
Average Forward Current (50% Duty Cycle), $I_{F(AV)}$, T_A = 25°C 1.2A
Average Forward Current (50% Duty Cycle), $I_{F(AV)}$ 4A
T_{CASE} = 100°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, $R_{\theta J\text{-}A}$ . . . . . 175°C/W
Thermal Resistance, Junction to Case, $R_{\theta J\text{-}C}$ . . . . . 12°C/W

MECHANICAL SPECIFICATIONS



All Dimensions in Millimeters and Inches

TO-205AF (TO-39)



Microsemi Corp.
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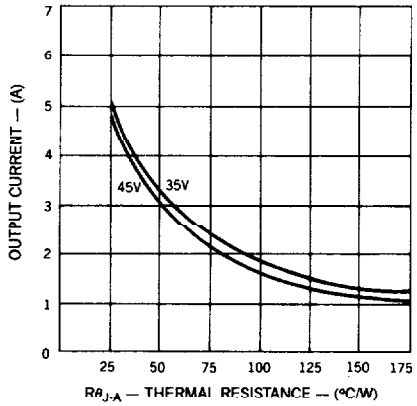
2

ELECTRICAL CHARACTERISTICS (at T_A = 25°C unless noted)

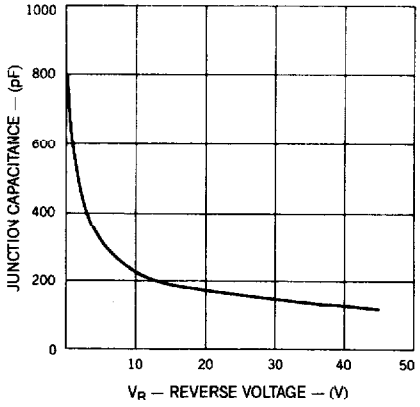
CHARACTERISTICS	SYMBOL	LIMIT	UNITS	CONDITIONS
Maximum Reverse Leakage Current	I_{RM1}	2.0	mA	V_{RM} = 45V [1]
	I_{RM2}	20	mA	V_{RM} = 45V, T_A = 125°C
	I_{RM3}	200	mA	V_{RM} = 45V, T_A = 175°C
		20	mA	V_{RM} = 45V, T_A = −55°C
	I_{RM4}	2.0	A	V_{RSM} = 54V
Maximum Forward Voltage	V_{FM1}	0.92	V	I_{FM} = 8A (pk) [1, 2]
	V_{FM2}	0.68	V	I_{FM} = 4A (pk)
	V_{FM3}	0.56	V	I_{FM} = 2A (pk)
		0.63	V	I_{FM} = 2A (pk), T_A = −55°C
	V_{FM4}	0.48	V	I_{FM} = 1A (pk)
Capacitance	C_T	450	pf	V_R = 5V
Surge Current	I_{SURGE}			I_{FSM} = 80A (pk) V_{RM} = 45V (pk) I_O = 0.75A 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 case

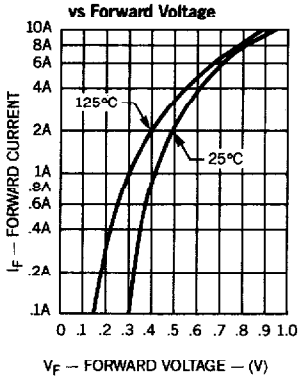
Output Current vs $R_{\theta J A}$
$T_{ambient}$ = 25°C, 50% Duty Cycle



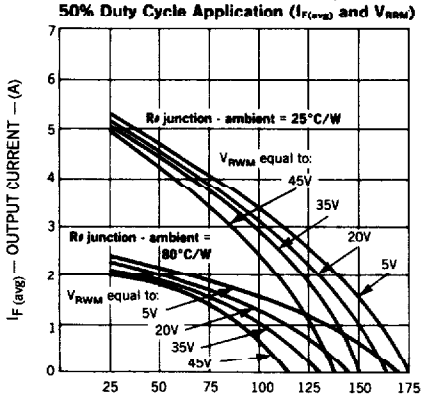
Typical Junction Capacitance vs Reverse Voltage



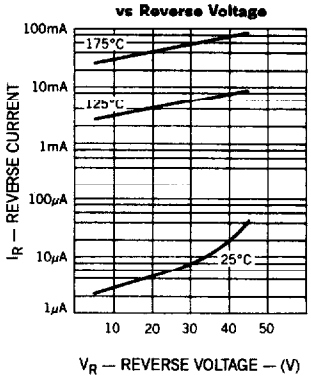
Typical Forward Current vs Forward Voltage



Output Current vs Ambient Temperature
50% Duty Cycle Application ($I_{F(avg)}$ and V_{RWM})



Typical Reverse Current vs Reverse Voltage



500 PLEASANT STREET - WATERTOWN, MA 02172
TEL. (617) 926-0404 • FAX (617) 924-1235