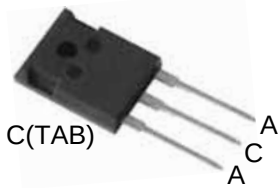
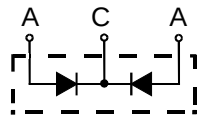


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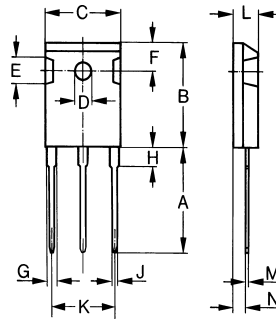
High T_{jm} (+175°C) Schottky Barrier Diodes



A=Anode, C=Cathode, TAB=Cathode



Dimensions TO-247AD



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.610	0.640
D	3.55	3.65	0.140	0.144
E	4.32	5.49	0.170	0.216
F	5.4	6.2	0.212	0.244
G	1.65	2.13	0.065	0.084
H	-	4.5	-	0.177
J	1.0	1.4	0.040	0.055
K	10.8	11.0	0.426	0.433
L	4.7	5.3	0.185	0.209
M	0.4	0.8	0.016	0.031
N	1.5	2.49	0.087	0.102

	V_{RRM}	V_{DC}
	V	V
MBR40100PT	100	100

Symbol	Characteristics	Maximum Ratings	Unit
$I_{F(AV)}$	Maximum Average Forward Rectified Current @ $T_C=145^\circ\text{C}$	40	A
I_{FSM}	Peak Forward Surge Current 10ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	300	A
dv/dt	Voltage Rate Of Change (Rated V_R)	10000	V/us
V_{FM}	Maximum Forward Voltage (Note 1) $I_F=20\text{A}$ @ $T_J=25^\circ\text{C}$ $I_F=20\text{A}$ @ $T_J=125^\circ\text{C}$ $I_F=40\text{A}$ @ $T_J=25^\circ\text{C}$ $I_F=40\text{A}$ @ $T_J=125^\circ\text{C}$	0.77 0.61 0.91 0.75	V
I_{RM}	Maximum DC Reverse Current At Rated DC Blocking Voltage @ $T_J=25^\circ\text{C}$ @ $T_J=125^\circ\text{C}$	1.25 15	mA
R_{thJC}	Typical Thermal Resistance (Note 2)	1.25	$^\circ\text{C/W}$
C_T	Typical Junction Capacitance Per Element (Note 3)	600	pF
T_J	Operating Temperature Range	-55 to +175	$^\circ\text{C}$
T_{STG}	Storage Temperature Range	-55 to +175	$^\circ\text{C}$

NOTES: 1. 300us Pulse Width, Duty Cycle 2%.
2. Thermal Resistance Junction To Case.
3. Measured At 1.0MHz And Applied Reverse Voltage Of 4.0V DC.

FEATURES

- * Metal of silicon rectifier, majority carrier conduction
- * Guard ring for transient protection
- * Low power loss, high efficiency
- * High current capability, low V_f
- * High surge capacity
- * For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- * Case: TO-247AD molded plastic
- * Polarity: As marked on the body
- * Weight: 0.2 ounces, 5.6 grams
- * Mounting position: Any

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High T_{jm} (+175°C) Schottky Barrier Diodes

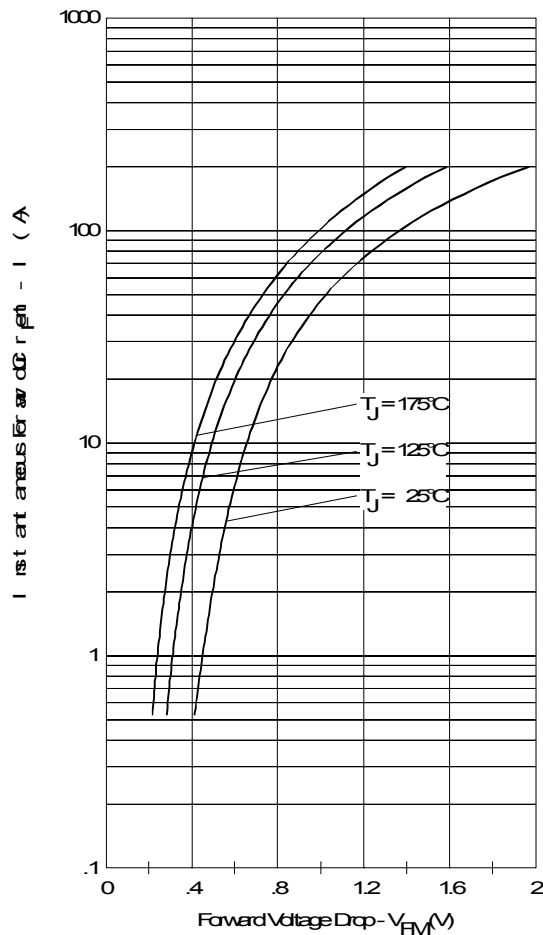


Fig. 1 - Max. Forward Voltage Drop Characteristics (Per Leg)

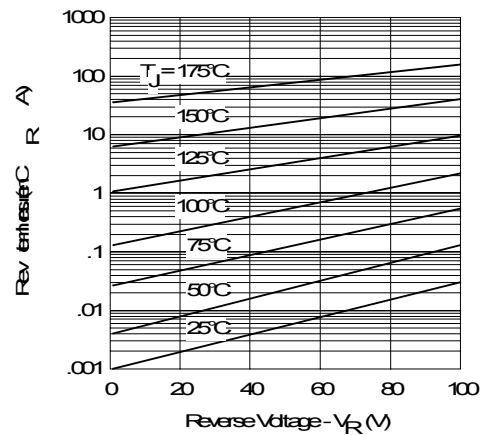


Fig. 2 - Typical Values Of Reverse Current Vs. Reverse Voltage (Per Leg)

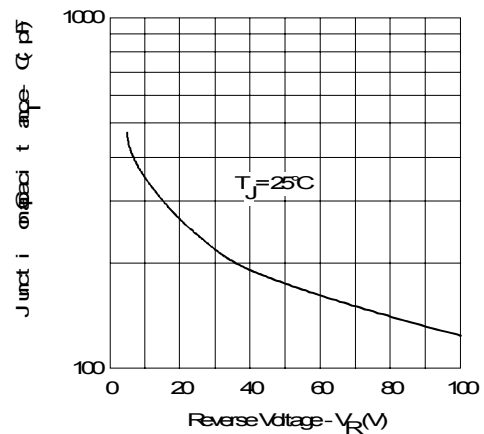


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

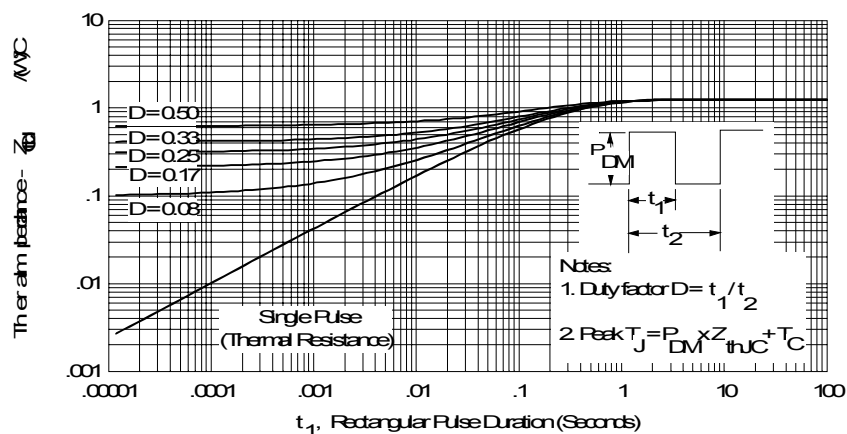


Fig. 4 - Max. Thermal Impedance Z_{thJC} Characteristics (Per Leg)

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High T_{jm} (+175°C) Schottky Barrier Diodes

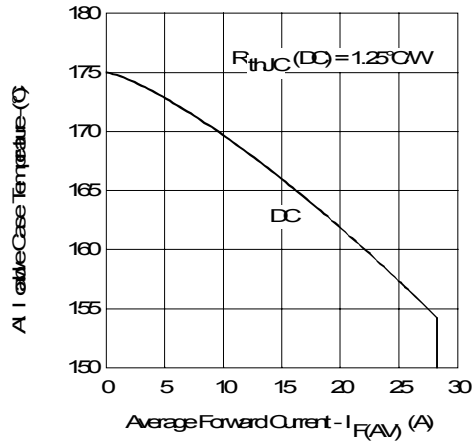


Fig. 5 - Max. Allowable Case Temperature Vs. Average Forward Current (Per Leg)

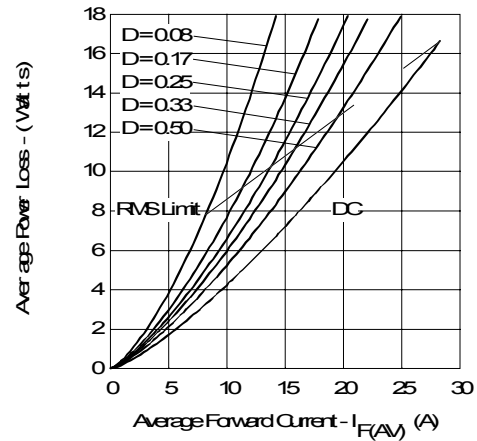


Fig. 6 - Forward Power Loss Characteristics (Per Leg)

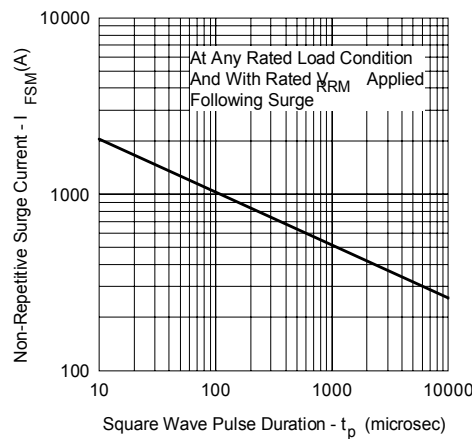


Fig. 7 - Max. Non-Repetitive Surge Current (Per Leg)

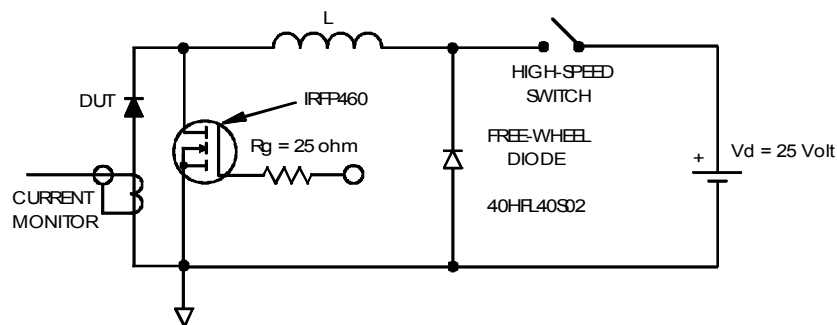


Fig. 8 - Unclamped Inductive Test Circuit