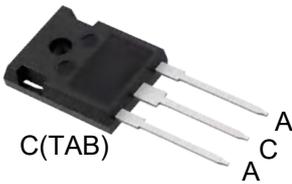
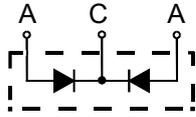


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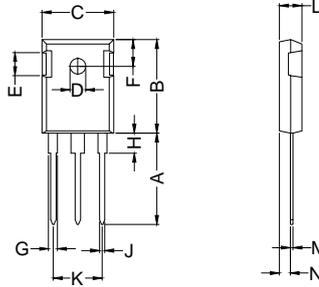


C(TAB)



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	0.620	0.640
ØD	3.15	3.65	0.124	0.144
E	4.32	5.49	0.170	0.216
F	5.40	6.30	0.213	0.248
G	1.65	2.18	0.065	0.086
H	3.80	4.50	0.150	0.177
J	1.00	1.40	0.039	0.055
K	10.80	11.10	0.425	0.437
L	4.70	5.30	0.185	0.209
M	0.40	0.80	0.016	0.031
N	1.50	2.49	0.059	0.098

	V _{RRM} V	V _{DC} V
MBR40100PT	100	100

Symbol	Characteristics	Maximum Ratings	Unit
I _{F(AV)}	Maximum Average Forward Rectified Current @T _c =145°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 =20A @T _J =25°C I _F =20A @T _J =125°C I _F =40A @T _J =25°C I _F =40A @T _J =125°C	0.77 0.61 0.91 0.75	V
I _{RM}	Maximum DC Reverse Current At Rated DC Blocking Voltage @T _J =25°C @T _J =125°C	1.25 15	mA
R _{thJC}	Typical Thermal Resistance (Note 2)	1.25	°C/W
C _T	Typical Junction Capacitance Per Element (Note 3)	600	pF
T _J	Operating Temperature Range	-55 to +175	°C
T _{STG}	Storage Temperature Range	-55 to +175	°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 conducton
- * 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 whelling, and polarity protection applications
- * RoHS compliance

MECHANICAL DATA

- * Case: TO-247AD molded plastic
- * Polarity: As marked on the body
- * Weight: 6 grams
- * Mounting position: Any



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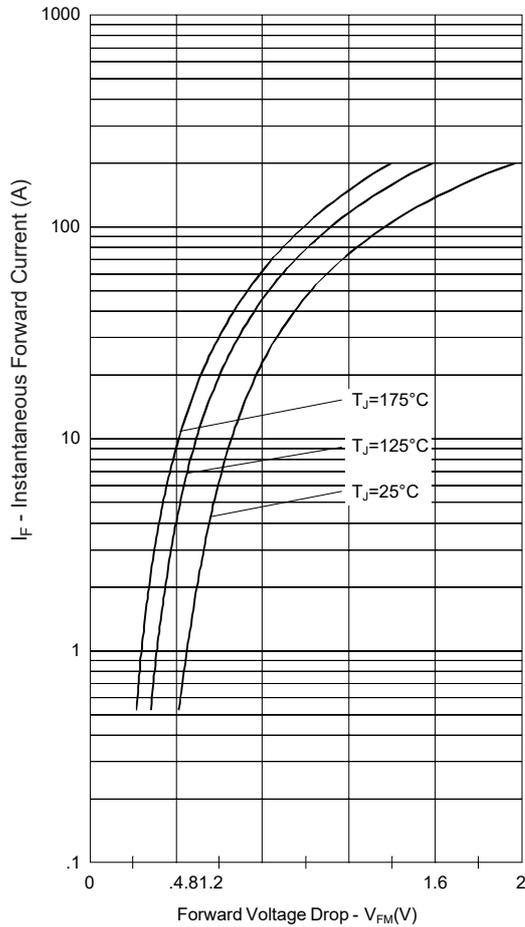


Fig. 1 - Max. Forward Voltage Drop Characteristics (Per Leg)

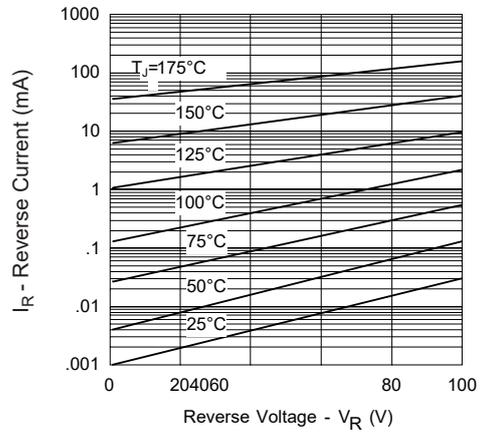


Fig. 2 - Typical Values Of Reverse Current Vs. Reverse Voltage (Per Leg)

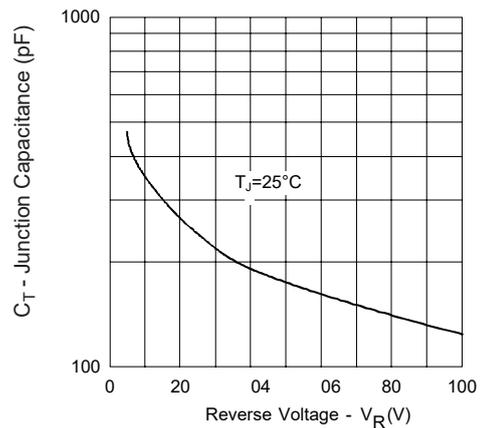


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

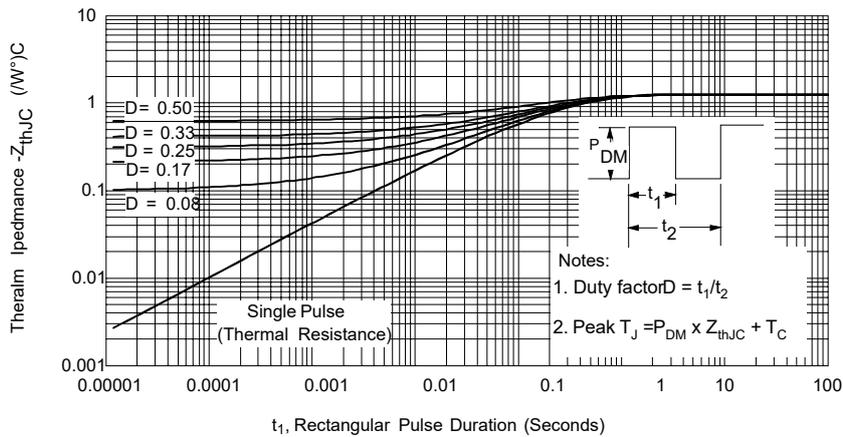


Fig. 4 - Max. Thermal Impedance Z_{thJC} Characteristics (Per Leg)

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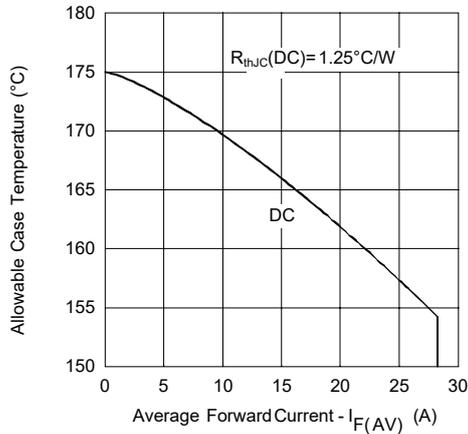


Fig. 5 - Max. Allowable Case Temperature Vs. Average Forward Current (Per Leg)

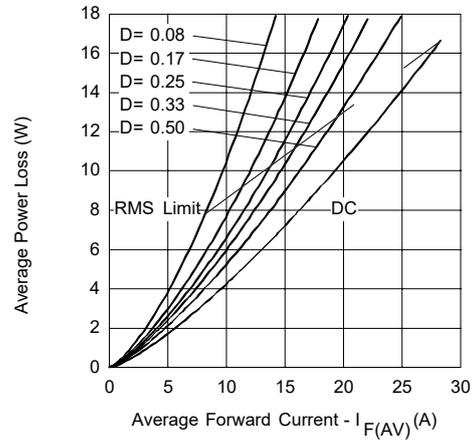


Fig. 6 - Forward Power Loss Characteristics (Per Leg)

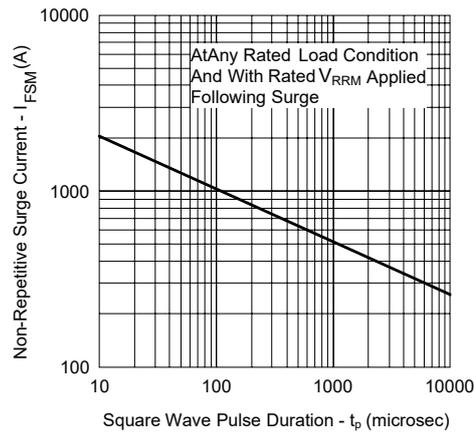


Fig. 7 - Max. Non-Repetitive Surge Current (Per Leg)

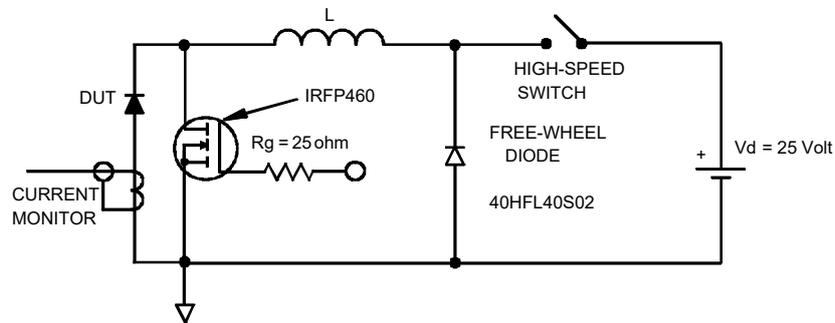
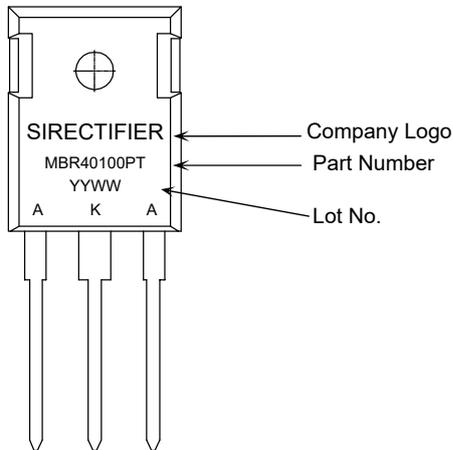


Fig. 8 - Unclamped Inductive Test Circuit

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MARKING



ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
MBR40100PT	TO-247AD	30pcs / Tube	MBR40100PT