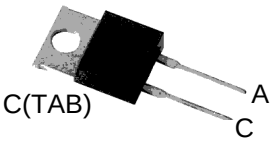
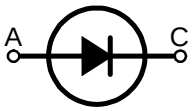
MBR540

Wide Temperature Range and High T_{jm} Schottky Barrier Rectifiers

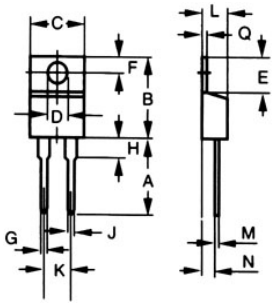




A=Anode, C=Cathode, TAB=Cathode

	V_{RRM}	V_{RMS}	V_{DC}
	V	V	V
MBR540	40	28	40

Dimensions TO-220AC



Dim.	Inches		Milimeter	
	Min.	Max.	Min.	Max.
A	0.500	0.580	12.70	14.73
B	0.560	0.650	14.23	16.51
C	0.380	0.420	9.66	10.66
D	0.139	0.161	3.54	4.08
E	2.300	0.420	5.85	6.85
F	0.100	0.135	2.54	3.42
G	0.045	0.070	1.15	1.77
H	-	0.250	-	6.35
J	0.025	0.035	0.64	0.89
K	0.190	0.210	4.83	5.33
L	0.140	0.190	3.56	4.82
M	0.015	0.022	0.38	0.56
N	0.080	0.115	2.04	2.49
Q	0.025	0.055	0.64	1.39

Symbol	Characteristics	Maximum Ratings	Unit
$I_{(AV)}$	Maximum Average Forward Rectified Current @T_C=95°C	5	A
I_{FSM}	Peak Forward Surge Current 8.3ms Single Half-Sine-Wave Superimposed On Rated Load (JEDEC METHOD)	175	A
V_F	Maximum Forward Voltage At 5.0A DC (Note 1)	0.55	V
I_R	Maximum DC Reverse Current @T_J=25°C At Rated DC Blocking Voltage @T_J=100°C	0.5 33	mA
C_J	Typical Junction Capacitance (Note 2)	350	pF
$R_{\theta JC}$	Typical Thermal Resistance (Note 3)	3.5	°C/W
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

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

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

MECHANICAL DATA

* Case: TO-220AC molded plastic
* Polarity: As marked on the body
* Weight: 0.08 ounces, 2.24 grams
* Mounting position: Any

Sirectifier®

MBR540

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FIG.1 - FORWARD CURRENT DERATING CURVE

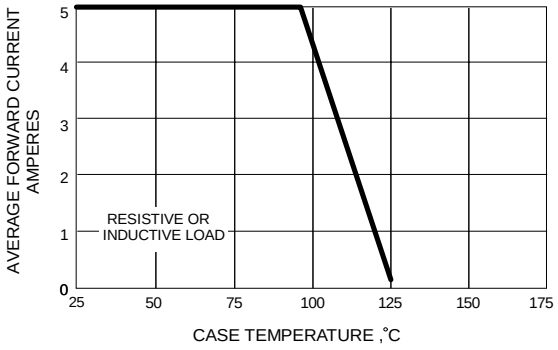


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

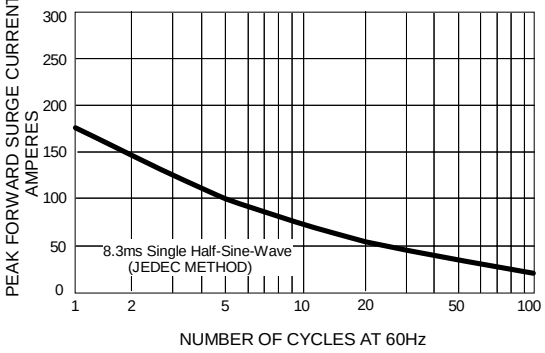


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

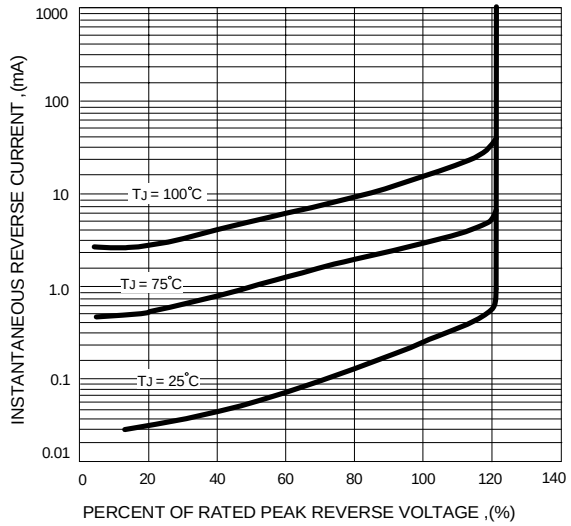


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

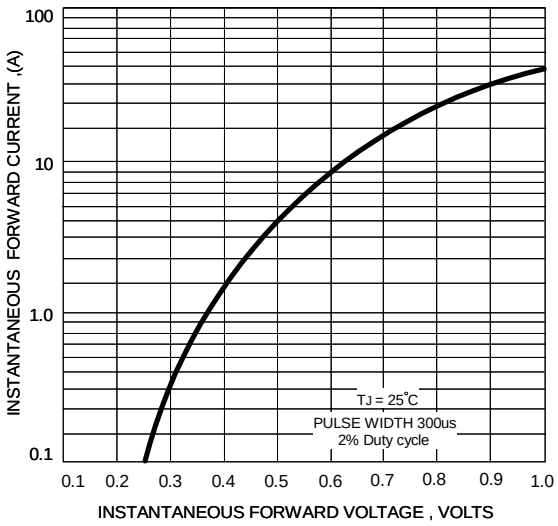
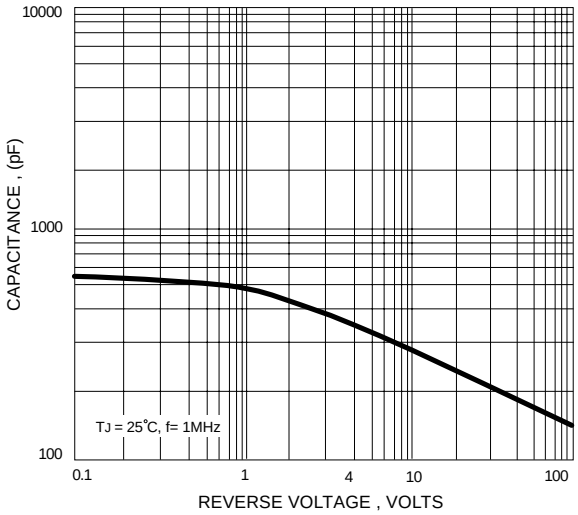


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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