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MBR4040 thru MBR4060

40 Amp HT Power Schottky Barrier Rectifier

40 Volts to 60 Volts

Features

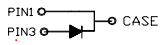
* High Junction Temperature Capability
* Low Leakage Current and Low Forward Voltage Drop
* Low Power Loss and High Efficiency

Maximum Ratings

* Operating Junction Temperature: 150°C
* Storage Temperature: - 55 °C to +175°C
* Per diode Thermal Resistance 2.2°C/W Junction to Case

Mechanical Data

* Case: Molded Plastic
* Terminals: Plated Lead Solderable per MIL-STD-202, Method 208
* Marking:Type Number
* Weight: 6 grams (approx)



TO-3P

Dim	Millimeter		Inches	
	Min..	Max	Min.	Max.
A	4.70	5.30	0.185	0.209
B	2.79	3.18	0.110	0.125
C	1.50	2.50	0.059	0.098
D	1.00	1.40	0.040	0.055
E	2.00	2.40	0.079	0.094
F	3.00	3.40	0.118	0.133
G	0.400	0.800	0.016	0.031
H	21.8	22.4	0.860	0.883
J	15.9	16.5	0.627	0.650
K	5.45	----	0.215	----
L	20.2	20.6	0.795	0.810
M	4.00	4.60	0.157	0.180
N	3.00	3.40	0.118	0.133
P	6.80	7.62	0.268	0.300
Q	4.44	5.30	0.175	0.210
R	1.72	2.03	0.068	0.080

Symbol	Characteristics		MBR4040	MBR4045	MBR4060	Unit
V_{RRM}	Maximum Recurrent Peak Reverse Voltage		40	45	60	V
V_{RM}	Maximum DC Blocking Voltage		40	45	60	V
$V_{R(RMS)}$	Maximum RMS Voltage		28	31.5	42	V
V_F	Maximum Forward Voltage Drop Per Element I_F=40A @T_J=25°C		0.70		0.80	V
$I_{F(AV)}$	Average Forward Current		40			A
I_{FSM}	8.3ms Single Half-Sine-Wave Superimposed On Rated Load		300			A
dv/dt	Voltage Rate Of Change (Rated V_R)		10000			V/us
I_R	Maximum DC Reverse Current	T_J=25°C	0.2			mA
	At Rated DC Blocking Voltage	T_J=125°C	40			
R_{thJC}	Typical Thermal Resistance (Note 2)		2.0			°C/ W
C_J	Typical Junction Capacitance (Note 3)		400			pF
T_J	Operating Temperature Range		-55to+150			°C
T_{STG}	Storage Temperature Range		-55to+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.