KERSEMI

MBR4020PT THRU MBR4060PT

40 Amp Schottky Barrier Rectifier 20 to 60 Volts

Features

- High Surge Capacity
- Low Power Loss, High Efficiency
- High Current Capability
- Metal of silicon Rectifier, majority Carrier Conduction
- Guard Ring For Transient Protection

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +175°C

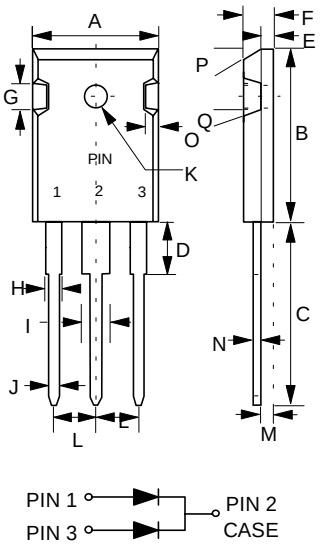
Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR4020PT	20V	14V	20V
MBR4030PT	30V	21V	30V
MBR4035PT	35V	24.5V	35V
MBR4040PT	40V	28V	40V
MBR4045PT	45V	31.5V	45V
MBR4060PT	60V	42V	60V

Electrical Characteristics @25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	40.0A	T_C=125°C
Peak Forward Surge Current	I_{FSM}	400A	8.3ms half sine
Maximum Instantaneous Forward Voltage MBR4020PT-4045PT MBR4060PT MBR4020PT-4045PT MBR4060PT	V_F	.70V .80V .60V .70V	I_{FM}=20.0A T_C=25°C T_C=125°C
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	1.0mA 100mA	T_C=25°C T_C=125°C
Typical Junction Capacitance	C_j	700pF	Measured at 1.0MHz, V_R=4.0V

Pulse test: Pulse width 300 usec, duty cycle 2%.

TO-3P



DIMENSIONS					
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.620	.640	15.75	16.25	
B	.837	.856	21.25	21.75	
C	.772	.791	19.60	20.10	
D	.149	.172	3.78	4.38	
E	.074	.082	1.88	2.08	
F	.192	.202	4.87	5.13	
G	.173 TYP		4.4 TYP		
H	.075	.085	1.90	2.16	
I	.115	.127	2.93	3.22	
J	.044	.048	1.12	1.22	
K	.114	.126	2.90	3.20	Ø
L	.205	.224	5.20	5.70	
M	.083	.095	2.10	2.40	
N	.020	.030	0.51	0.76	
O	.076	.086	1.93	2.18	
P	20° TYP				
Q	10° TYP				

MBR4020PT thru MBR4060PT

FIG.1 - FORWARD CURRENT DERATING CURVE

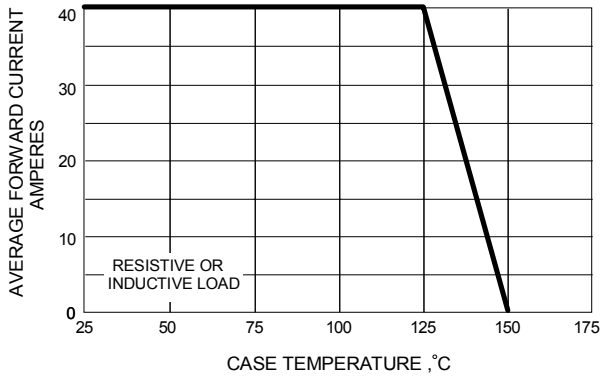


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

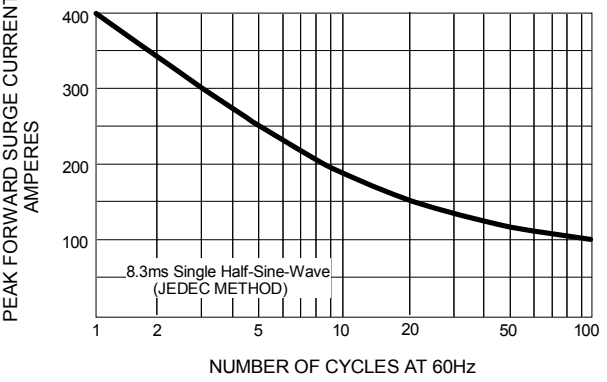


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

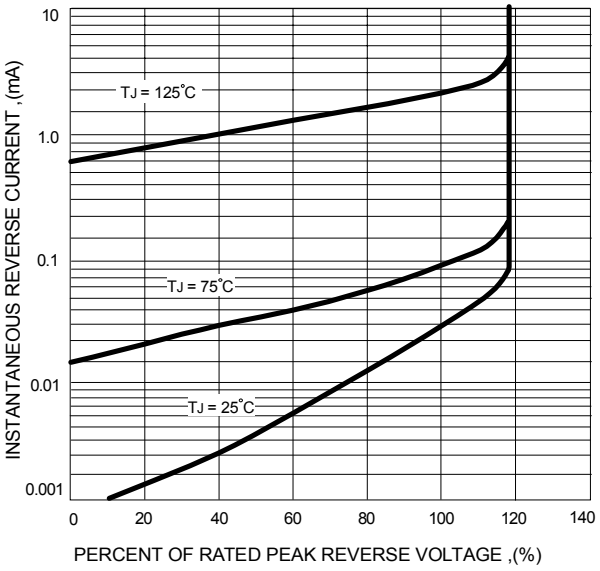


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

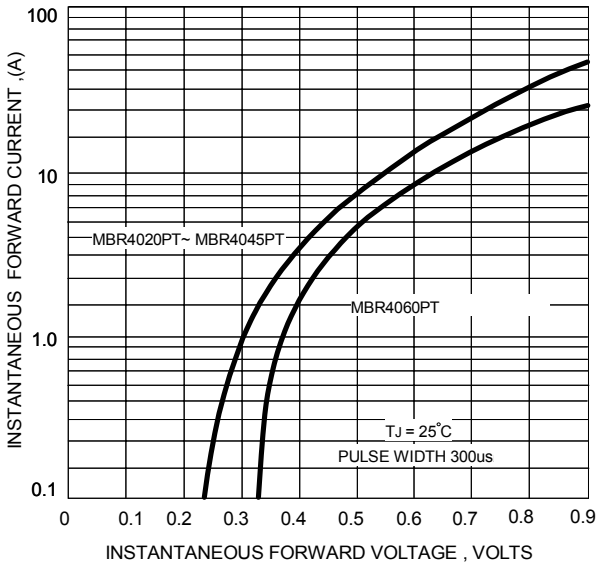


FIG.5 - TYPICAL JUNCTION CAPACITANCE