Micro Commercial Components
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MBR50020CT THRU MBR50045CT

500 Amp Schottky Barrier Rectifier 20 to 45 Volts

Features

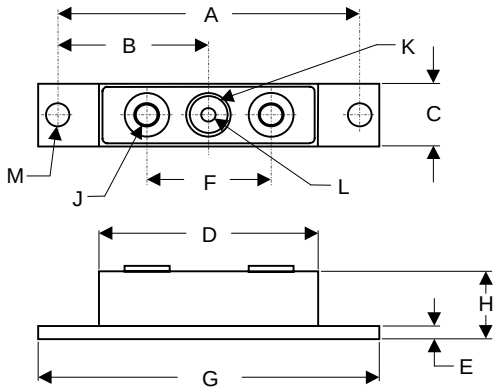
- Metal of siliconrectifier, majonty carrier conducton
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability

Maximum Ratings

- Operating Junction Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C
- Typical Thermal Resistance per leg 0.4°C/W Junction to Case

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MBR50020CT	20V	14V	20V
MBR50030CT	30V	21V	30V
MBR50035CT	35V	24.5V	35V
MBR50040CT	40V	28V	40V
MBR50045CT	45V	31.5V	45V

FULL PACK



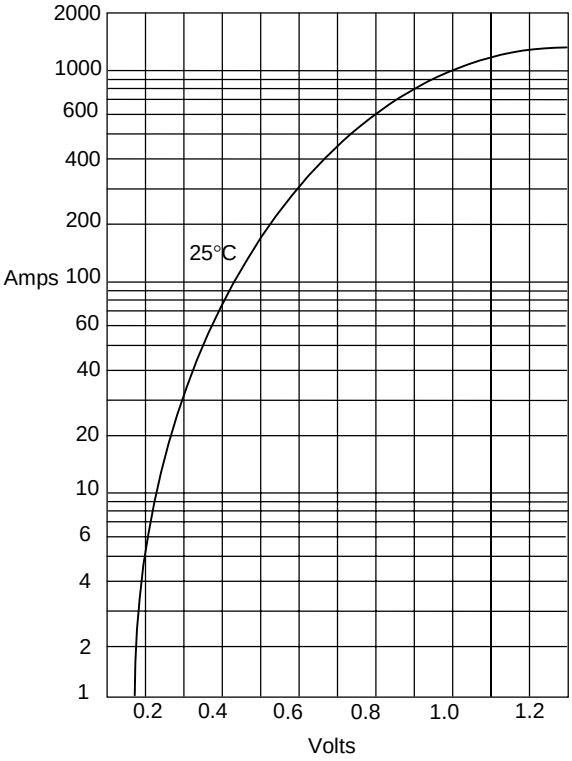
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	3.150	NOM	80.01	NOM	
B	1.565	1.585	39.75	40.26	
C	.700	.800	17.78	20.32	
D	2.400	2.500	60.96	63.50	
E	.119	.132	3.02	3.35	
F	1.365	1.385	34.67	35.18	
G	3.550	3.650	90.17	92.71	
H	.580	.620	14.73	15.75	
J	1/4 -20 UNF		FULL		
K	.380	.410	9.65	10.41	∅
L	.185	.195	4.70	4.95	∅
M	.275	.295	6.99	7.49	∅

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	500 A	T_c = 130°C
Peak Forward Surge Current	I_{FSM}	3400A	8.3ms, half sine
Maximum Instantaneous Forward Voltage 50020-50045CT	V_F	.63 V	I_{FM} = 250 A; T_J = 25°C
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	8 mA 200mA	T_J = 25°C T_J = 125°C
Typical Junction Capacitance	C_J	9500pF	Measured at 1.0MHz, V_R=5.0V

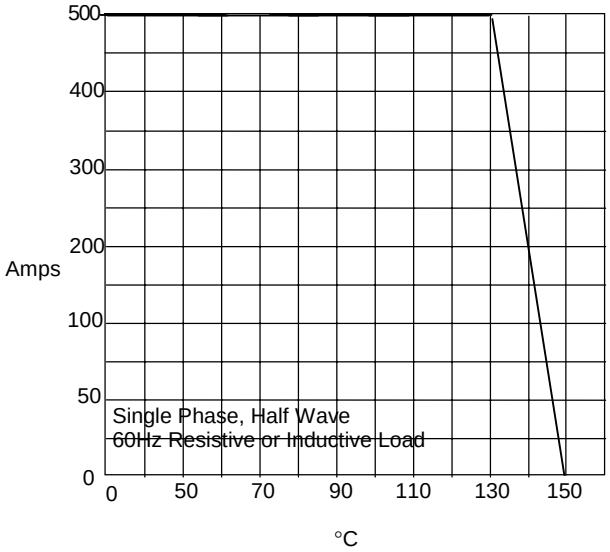
*Pulse Test: Pulse Width 300μsec, Duty Cycle 2%

Figure 1
Typical Forward Characteristics



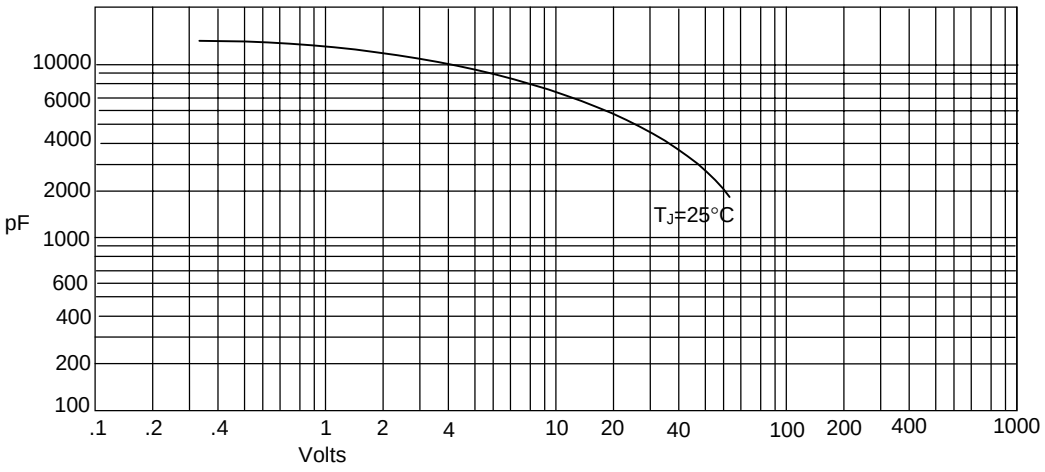
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



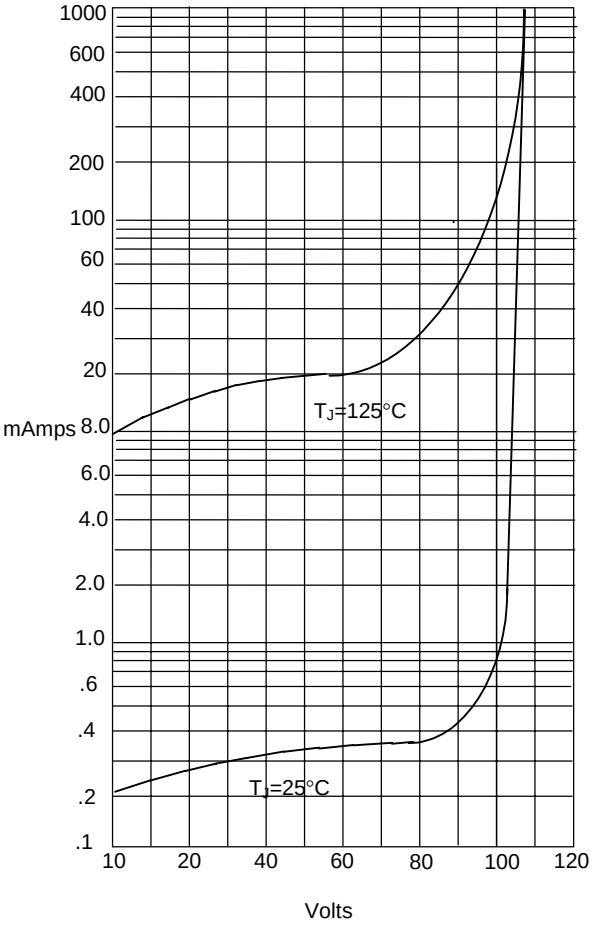
Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 3
Junction Capacitance



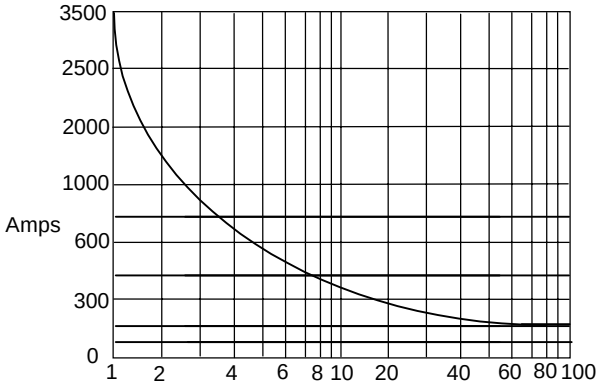
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles