



Micro Commercial Components
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MUR10005 THRU MUR10060

Features

- Supre Fast switching for high efficiency
- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability

100 Amp Supre Fast Recovery Rectifier 50 to 600 Volts

Maximum Ratings

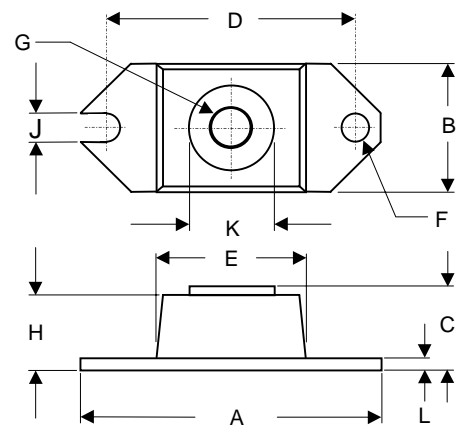
- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MUR10005	50V	35V	50V
MUR10010	100V	70V	100V
MUR10020	200V	40V	200V
MUR10040	400V	280V	400V
MUR10060	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	100 A	$T_C = 135^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	800A	8.3ms, half sine
Maximum Instantaneous Forward Voltage 10005-10020 10040-10060	V_F	1.25V 1.75V	$I_{FM} = 100A;$ $T_J = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	50 μ A 6mA	$T_J = 25^\circ\text{C}$ $T_J = 125^\circ\text{C}$
Maximum Reverse Recovery Time 10005-10020 10040 10060	T_{rr}	60ns 75ns 90ns	$I_F=0.5A, I_R=1.0A,$ $I_{rr}=0.25A$
Typical Junction Capacitance 10005-10020 10040 10060	C_J	575pF 300pF 275pF	Measured at 1.0MHz, $V_R=10V$

HALF PACK



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	1.515	1.560	38.48	39.62	
B	.725	.775	18.42	19.69	
C	.595	.625	15.11	15.88	
D	1.182	1.192	30.02	30.28	
E	.745	.755	18.92	18.18	
F	.152	.160	3.86	4.06	∅
G	1/4 - 20		UNC - 2B		
H	.540	.580	13.72	14.73	
J	.15	.160	3.96	4.06	
K	.495	.505	12.57	12.83	∅
L	.120	.130	3.05	3.30	

*Pulse Test: Pulse Width 300 μ sec, Duty Cycle 2%

MUR10005 thru MUR10060



Figure 1
Typical Forward Characteristics

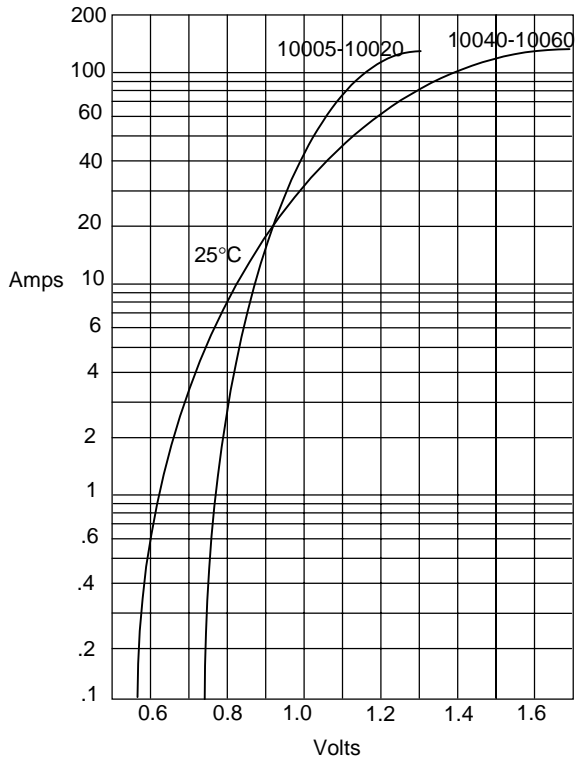


Figure 2
Forward Derating Curve

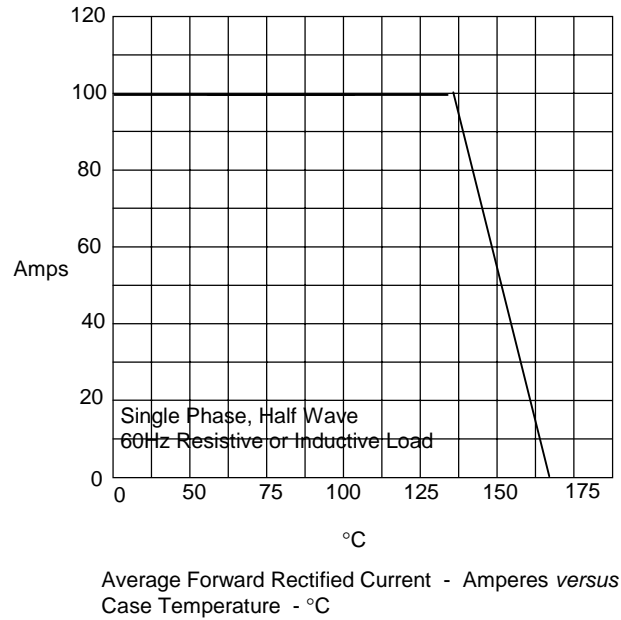


Figure 3
Junction Capacitance

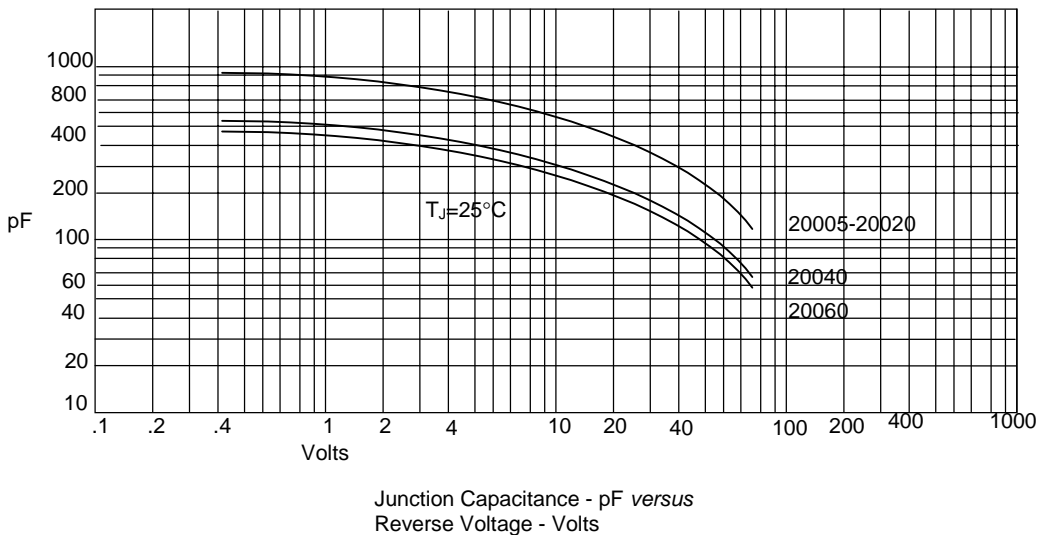
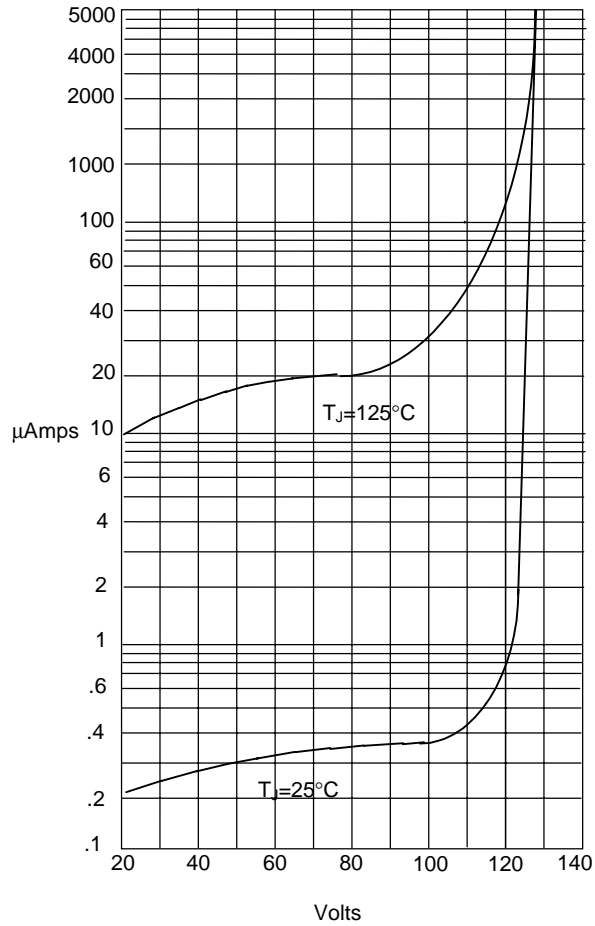
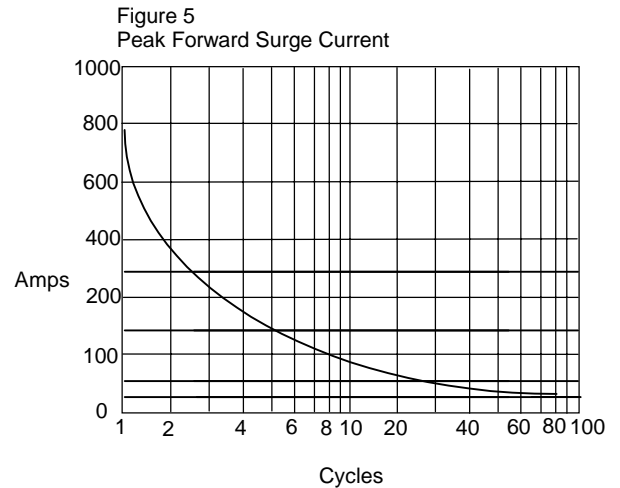




Figure 4
Typical Reverse Characteristics



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



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