DIGITRON SEMICONDUCTORS

MUR5005-MUR5060 **50A SCHOTTKY RECTIFIER**

MAXIMUM RATINGS

Rating	Symbol	MUR					Unit
		5005	5010	5020	5040	5060	
Peak repetitive reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	
DC blocking voltage	V_R	50	100	200	400	600	
Average forward current (Rated V_R) (1)	$I_{F(AV)}$	50 @ T_C = 135°C					A
Peak forward surge current (8.3ms, halfsine)	I_{FSM}	600					A
Operating and storage junction temperature range	T_J, T_{stg}	-55 to +175					°C

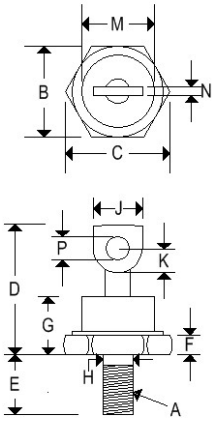
ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

Parameter	Symbol	MUR					Unit
		5005	5010	5020	5040	5060	
Maximum instantaneous forward voltage (1) (I_F = 50A, T_C = 25°C)	V_F	1.15			1.35	1.70	V
Maximum DC reverse current (1) (Rated dc voltage, T_C = 25°C)	I_R	50					µA
(Rated dc voltage, T_C = 125°C)		6					mA
Maximum reverse recovery time (I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A)	t_{rr}	60			75	90	ns
Typical junction capacitance (1.0MHz, V_R = 10V)	C_J	575			300	275	pF

Note 1: Pulse test: Pulse width = 300µs, duty cycle ≤ 2.0%.

MECHANICAL CHARACTERISTICS

Case	DO-5(R)
Marking	Alpha-numeric
Normal polarity	Cathode is stud
Reverse polarity	Anode is stud (add "R" suffix)



	DO-5(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
A	¼-28 UNF2A threads			
B	0.669	0.688	16.990	17.480
C	-	0.794	-	20.160
D	-	1.000	-	25.400
E	0.422	0.453	10.720	11.510
F	0115	0.200	2.920	5.080
G	-	0.450	-	11.430
H	0.220	0.249	5.580	6.320
J	0.250	0.375	6.350	9.530
K	0.156	-	3.960	-
M	-	0.667	-	16.940
N	0.030	0.080	0.760	2.030
P	0.140	0.175	3.560	4.450

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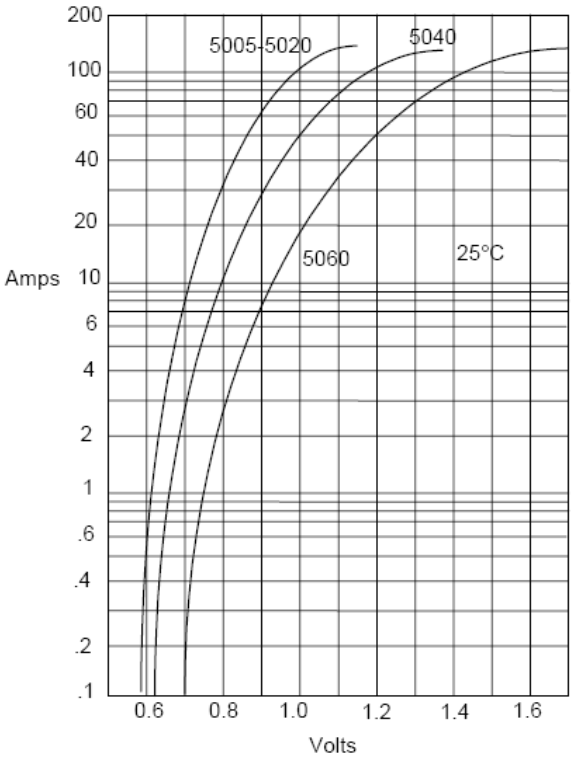
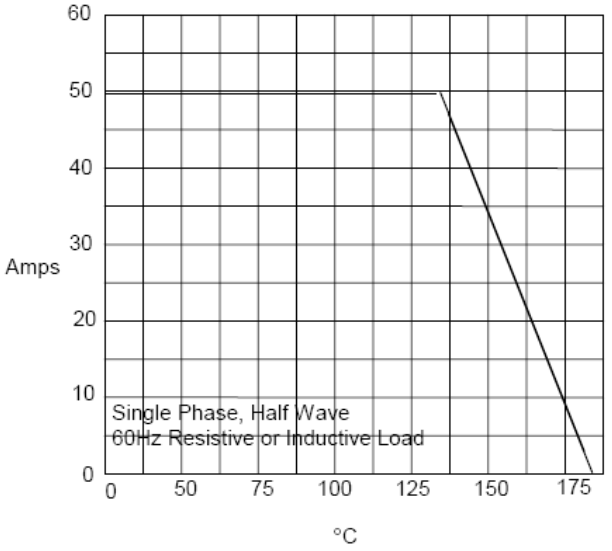
Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).
Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

Figure 1
Typical Forward Characteristics



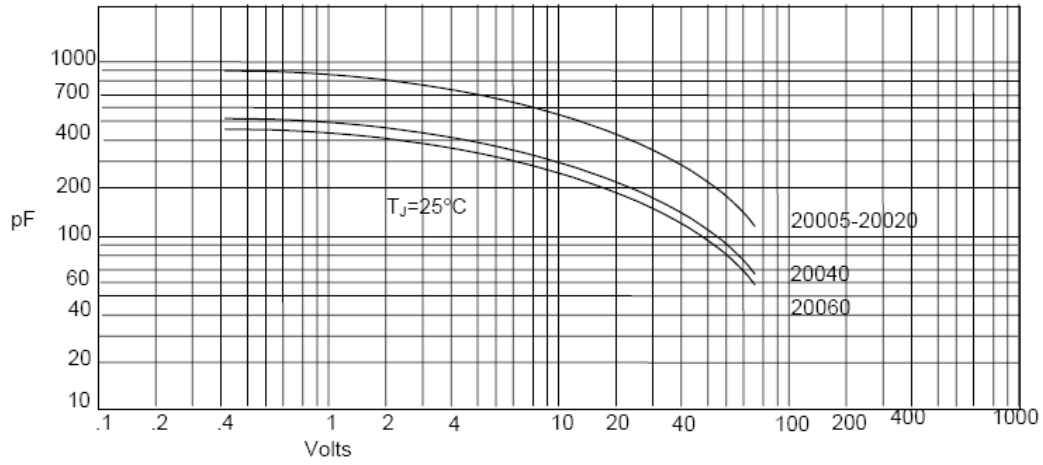
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

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

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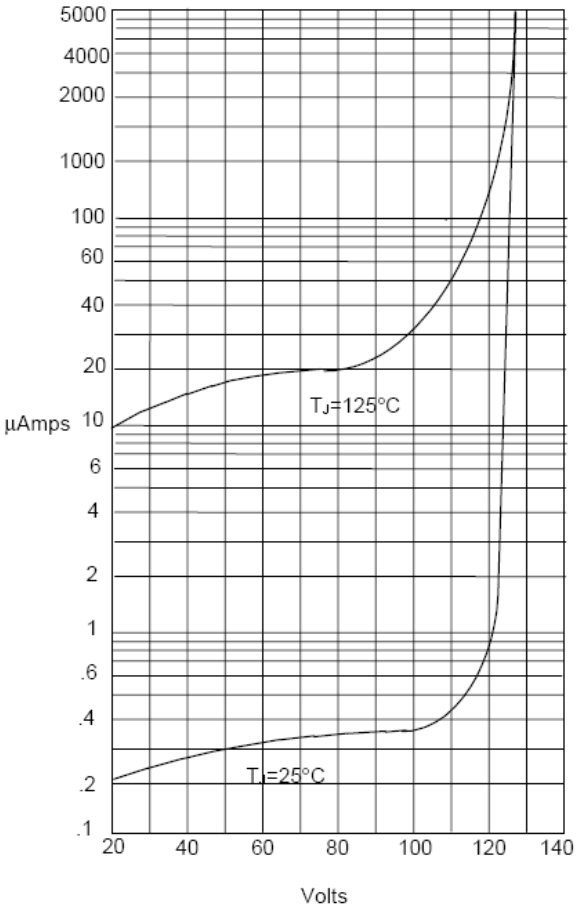
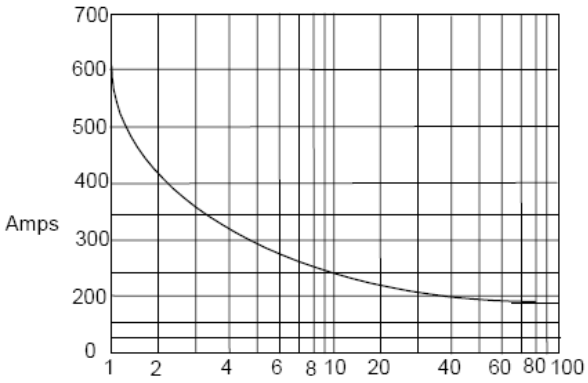
Figure 4
Typical Reverse Characteristics



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

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