

MUR7005-MUR7060

70A ULTRA FAST RECOVERY RECTIFIER

MAXIMUM RATINGS

Rating	Symbol	MUR					Unit
		7005	7010	7020	7040	7060	
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 rectified forward current (Rated V_R)	$I_{F(AV)}$	70 @ $T_C = 135^\circ C$					A
Peak forward surge current (8.3ms, half sine)	I_{FSM}	1000					A
Operating and storage junction temperature range	T_J, T_{stg}	-55 to +175					$^\circ C$

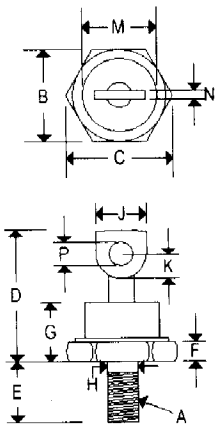
ELECTRICAL CHARACTERISTICS (@ 25°C unless otherwise noted)

Parameter	Symbol	MUR					Unit
		7005	7010	7020	7040	7060	
Maximum instantaneous forward voltage ⁽¹⁾ ($I_F = 70A, T_J = 25^\circ C$)	V_F	0.975			1.25	1.35	V
Maximum DC reverse current ⁽¹⁾ (Rated dc voltage, $T_J = 25^\circ C$) (Rated dc voltage, $T_J = 125^\circ C$)	I_R	50 6					μA 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 = 300 μs , 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)



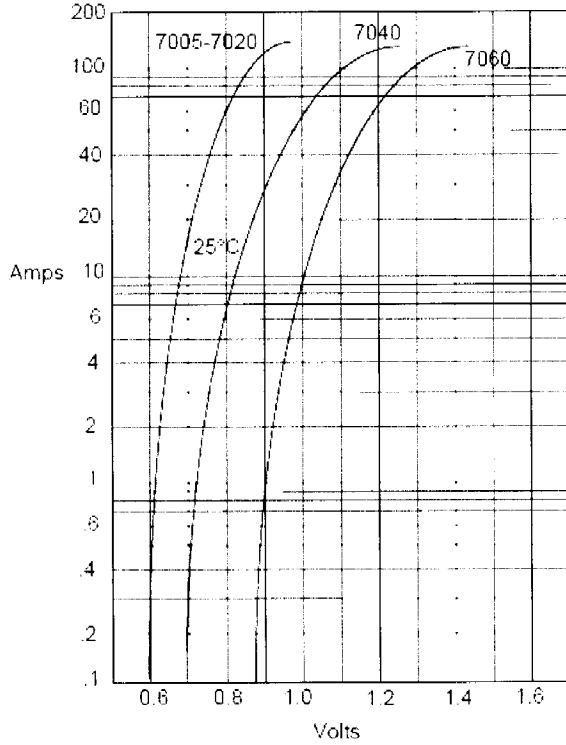
	DO-5(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
A	$\frac{1}{4}$ -28 UNF2A threads			
B	0.669	0.688	16.990	17.480
C	-	0.794	-	20.160
D	-	1.000	-	25.400
E	0.422	0.453	10.720	11.510
F	0.115	0.200	2.920	5.080
G	-	0.450	-	11.430
H	0.220	0.249	5.580	6.320
J	0.250	0.375	6.350	9.530
K	0.156	-	3.960	-
M	-	0.667	-	16.940
N	0.030	0.080	0.760	2.030
P	0.140	0.175	3.560	4.450

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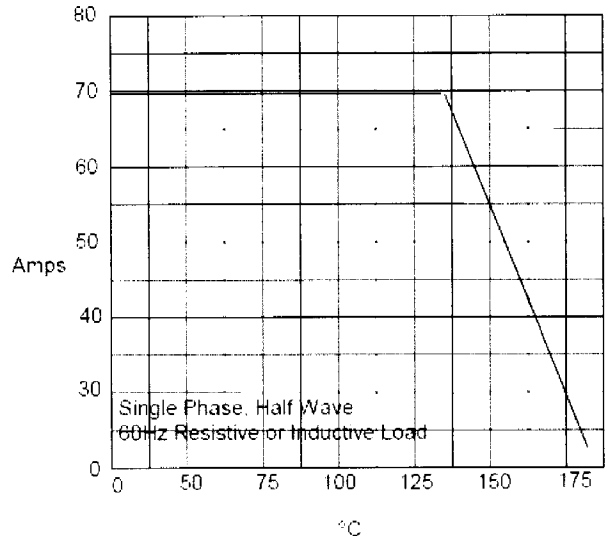
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Figure 1
Typical Forward Characteristics



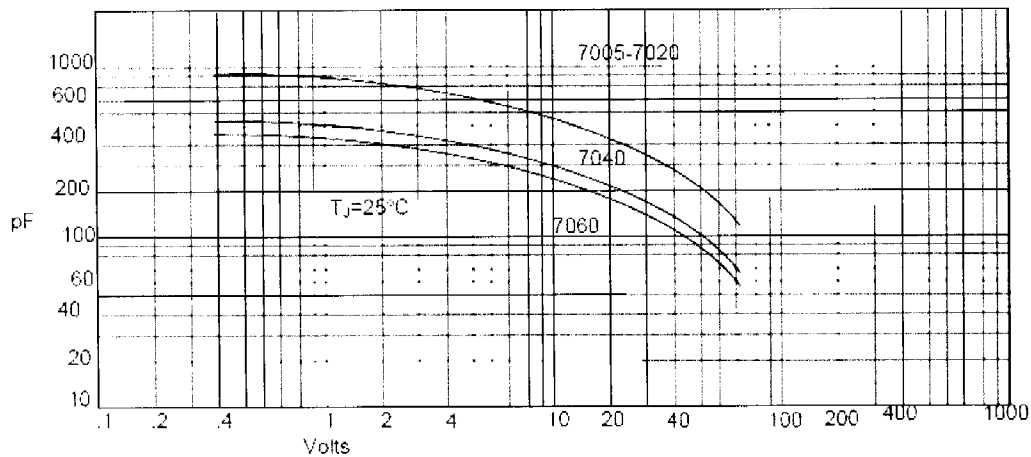
Instantaneous Forward Current - Amperes versus Instantaneous Forward Voltage - Volts

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