

MUR3020-MUR3040

30A ULTRA FAST RECTIFIERS

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Rating	Symbol	MUR3020	MUR3030	MUR3040	Unit
Peak repetitive reverse voltage	V_{RRM}	200	300	400	V
Working peak reverse voltage	V_{RWM}				
DC blocking voltage	V_R				
Average rectified forward current (Rated V_R)	$I_{F(AV)}$	30 @ $T_C = 70^\circ\text{C}$			A
Peak repetitive surge current (Rated V_R , square wave, 20 kHz)	I_{FRM}	30 @ $T_C = 150^\circ\text{C}$			A
Non-repetitive peak surge current (surge applied at rated load conditions, halfwave, single phase, 60Hz)	I_{FSM}	300			A
Operating and storage junction temperature range	T_J, T_{stg}	-65 to +175			$^\circ\text{C}$
Maximum thermal resistance Junction to case	$R_{\theta JC}$	1.0			$^\circ\text{C}/\text{W}$

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

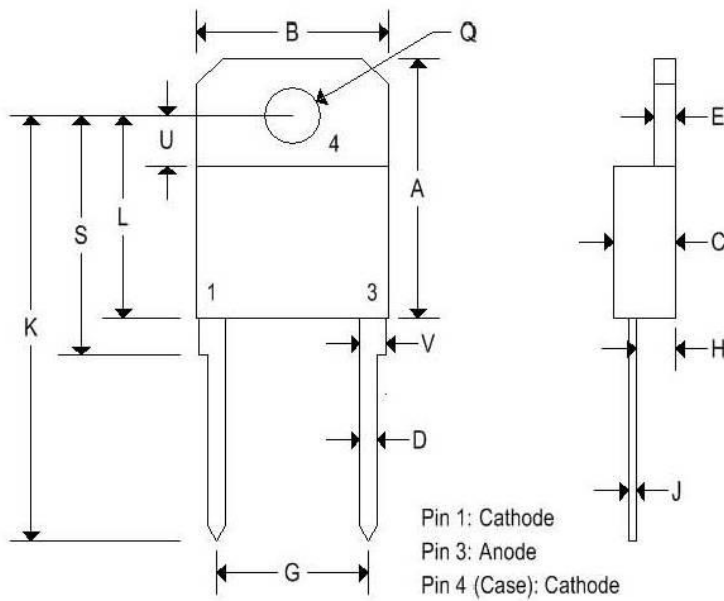
Parameter	Symbol	MUR3020	MUR3030	MUR3040	Unit
Maximum instantaneous forward voltage ($I_F = 30\text{A}$, $T_C = 100^\circ\text{C}$) ($I_F = 30\text{A}$, $T_C = 25^\circ\text{C}$)	V_F		1.4		V
			1.5		
Maximum instantaneous reverse current (Rated dc voltage, $T_C = 100^\circ\text{C}$) (Rated dc voltage, $T_C = 25^\circ\text{C}$)	I_R		6.0		mA
			35		μA
Maximum reverse recovery time ($I_F = 1.0\text{A}$, $di/dt = 15\text{A}/\mu\text{s}$)	t_{rr}		100		ns

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MECHANICAL CHARACTERISTICS

Case	TO-218
Marking	Alpha-numeric
Pin out:	See below



	TO-218			
	Inches		Millimeters	
	Min	Max	Min	Max
A	0.749	0.771	19.000	19.600
B	0.551	0.570	14.000	14.500
C	0.165	0.196	4.200	5.000
D	0.040	0.051	1.000	1.300
E	0.058	0.064	1.450	1.6500
G	0.411	0.450	10.420	11.440
H	0.103	0.118	2.600	3.000
J	0.016	0.023	0.400	0.600
K	1.123	1.259	28.500	32.000
L	0.579	0.602	14.700	15.300
Q	0.158	0.167	4.000	4.250
S	0.689	0.767	17.500	19.500
U	0.134	0.149	3.400	3.800
V	0.060	0.078	1.500	2.000

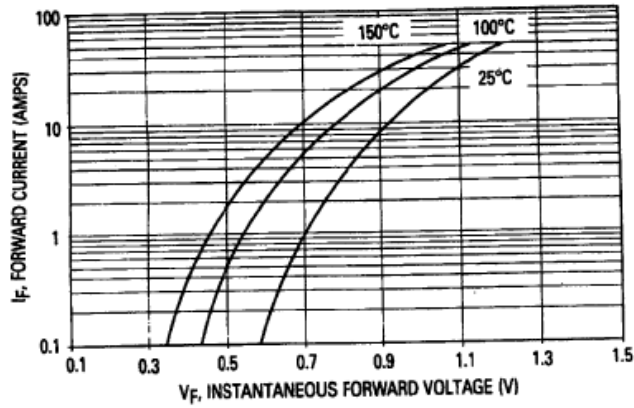


Figure 1. Typical Forward Voltage

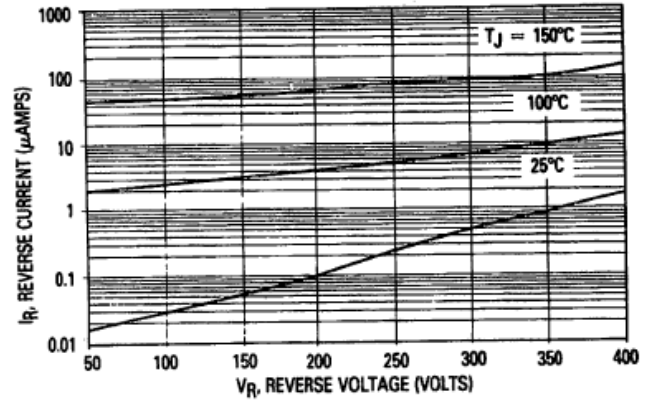


Figure 2. Typical Reverse Current

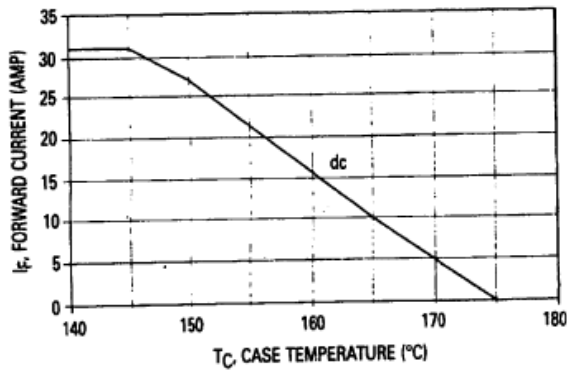


Figure 3. Current Derating, Case

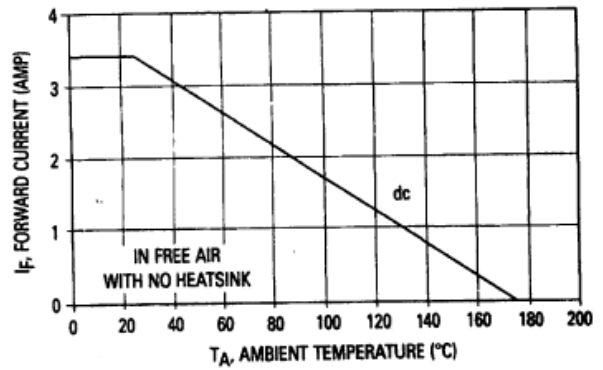


Figure 4. Current Derating, Ambient