

1N3288(A)-1N3297(A)

HIGH POWER 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

Part number		Maximum peak repetitive reverse voltage	Maximum non-repetitive peak reverse voltage	Maximum direct reverse voltage	Maximum peak reverse current
		V_{RRM}	V_{RSM}	V_R	I_{RRM}
		$T_C = -40^\circ \text{ to } +200^\circ\text{C}$	$T_C = 25^\circ \text{ to } 200^\circ\text{C}$	$T_C = -40^\circ \text{ to } +200$	$T_C = 130^\circ\text{C}$
		V	V	V	mA
1N3288	1N3288A	100	200	100	24
1N3289	1N3289A	200	300	200	24
1N3290	1N3290A	300	400	300	24
1N3291	1N3291A	400	525	400	24
1N3292	1N3292B	500	650	500	21
1N3293	1N3293A	600	800	600	17
1N3294	1N3294A	800	1050	800	13
1N3295	1N3295A	1000	1300	1000	11
1N3296	1N3296A	1200	1600	1200	9

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

Characteristics	Symbol	Non-A suffix	A suffix	Test Conditions	
Average forward current	I _{F(AV)}	100A		180° sinusoidal conduction, T _C = 130°C	
Maximum surge current	I _{FSM}	1500A	2200A	Half cycle, 50Hz sine wave	Following any rated load condition and with rated V _{RRM} applied
		1600A	2300A	Half cycle, 60Hz sine wave	
		1800A	2600A	Half cycle, 50Hz sine wave	Following any rated load condition and with V _{RRM} applied following surge = 0.
		1900A	2700A	Half cycle, 60Hz sine wave	
Maximum I ² t for fusing	I ² t	11500 A ² s	24000 A ² s	t = 10ms	With rated V _{RRM} applied following surge, initial T _J = 200°C
		10500 A ² s	22000 A ² s	t = 8.3ms	
Maximum I ² t for individual device fusing		16500 A ² s	34000 A ² s	t = 10ms	With V _{RRM} = 0 following surge, initial T _J = 200°C
		15000 A ² s	31000 A ² s	t = 8.3ms	
Maximum I ² vt for individual device fusing	I ² vt	165000 A ² vs	340000 A ² vs	t = 0.1 to 10ms, V _{RRM} = 0 following surge	
Maximum peak forward voltage	V _{FM}	1.5V		I _{FAV} = 100A, T _C = 130°C	

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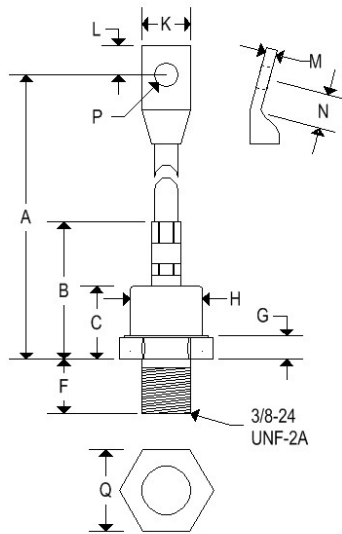
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THERMAL CHARACTERISTICS

Characteristics	Symbol	Test Conditions
Operating junction and storage temperature range	T_J, T_{stg}	-40° to 200°C
Operating junction and storage temperature range	T_J, T_{stg}	1N3292B = -65° to +200°C
Maximum thermal resistance	$R_{\theta JC}$	0.4°C/W junction to case
Maximum thermal resistance	$R_{\theta CS}$	0.1°C/W case to sink

MECHANICAL CHARACTERISTICS

Case	DO-8(R)
Marking	Alpha numeric
Normal polarity	Cathode is stud
Reverse polarity	Anode is stud (add "R" suffix)



	DO-8(R)			
	Inches		Millimeters	
	Min	Max	Min	Max
A	3.875	4.625	98.43	117.47
B	-	1.675	-	42.54
C	0.875	0.960	22.23	24.38
F	0.605	0.645	15.37	16.38
G	0.125	0.500	3.18	12.70
H	-	1.063	-	27.00
K	0.437	0.650	11.10	16.51
L	0.297	0.327	7.55	8.30
M	0.050	0.100	1.27	2.54
N	0.300	-	7.62	-
P	0.250	0.310	6.35	7.87
Q	1.031	1.063	26.19	27.00

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Figure 1
Typical Forward Characteristics

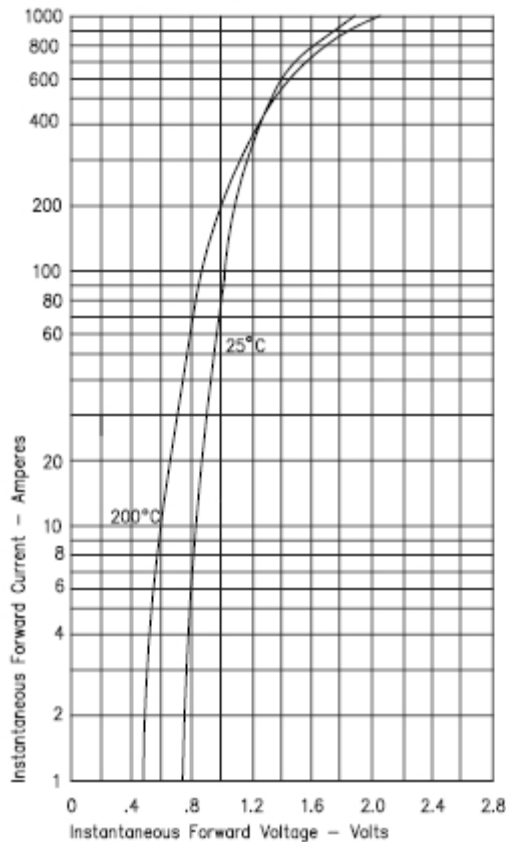


Figure 2
Typical Reverse Characteristics

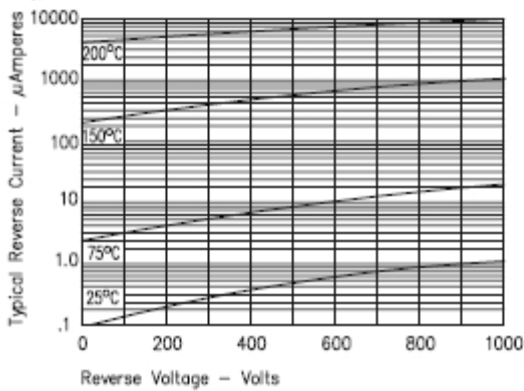


Figure 3
Forward Current Derating

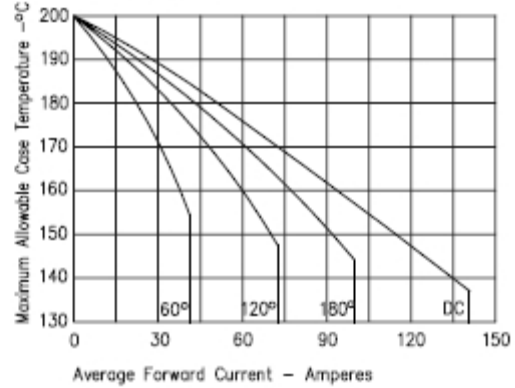


Figure 5
Transient Thermal Impedance

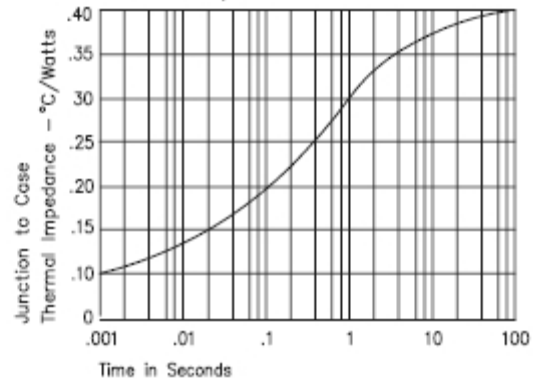


Figure 7
Maximum Nonrepetitive Surge Current

