

HIGH RELIABILITY SILICON POWER RECTIFIER

Qualified per MIL-PRF-19500/246

- Glass Passivated Die
- Glass to Metal Header Construction
- VRRM to 1000V
- 1600 Amps Surge Rating

DEVICES

1N3289	1N3294	1N3289R	1N3294R
1N3291	1N3295	1N3291R	1N3295R
1N3293		1N3293R	

LEVELS

JAN
JANTX
JANTXV

ABSOLUTE MAXIMUM RATINGS (T_C = +25°C unless otherwise noted)

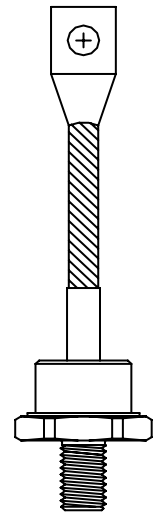
Parameters / Test Conditions	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RWM}	200	V
1N3289 1N3289R		400	
1N3291 1N3291R		600	
1N3293 1N3293R		800	
1N3294 1N3294R		1000	
Average Forward Current, T _C = 134°	I _F	100	A
Peak Surge Forward Current @ t _p = 8.3ms, half sinewave, T _C = 150°C	I _{FSM}	1600	A
Thermal Resistance, Junction to Case	R _{θJC}	0.4	°C/W
Operating Case Temperature Range	T _j	-65°C to 200°C	°C
Storage Temperature Range	T _{STG}	-65°C to 200°C	°C

ELECTRICAL CHARACTERISTICS (T_A = +25°C, unless otherwise noted)

Parameters / Test Conditions	Symbol	Min.	Max.	Unit	
Forward Voltage I _{FM} = 310A, T _C = 25°C *	V _{FM}		1.55	V	
Reverse Current	I _{RM}		10	mA	
V _{RM} = 200, T _C = 25°C					1N3289 1N3289R
V _{RM} = 400, T _C = 25°C					1N3291 1N3291R
V _{RM} = 600, T _C = 25°C					1N3293 1N3293R
V _{RM} = 800, T _C = 25°C					1N3294 1N3294R
V _{RM} = 1000, T _C = 25°C	1N3295 1N3295R				
Reverse Current	I _{RM}		30	mA	
V _{RM} = 200, T _C = 200°C					1N3289 1N3289R
V _{RM} = 400, T _C = 200°C					1N3291 1N3291R
V _{RM} = 600, T _C = 200°C					1N3293 1N3293R
V _{RM} = 800, T _C = 200°C					1N3294 1N3294R
V _{RM} = 1000, T _C = 200°C	1N3295 1N3295R				

* Pulse test: Pulse width 300µsec. Duty cycle 2%

Note:



DO-205AA (DO-8)

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GRAPHS

FIGURE 1

TYPICAL FORWARD CHARACTERISTICS

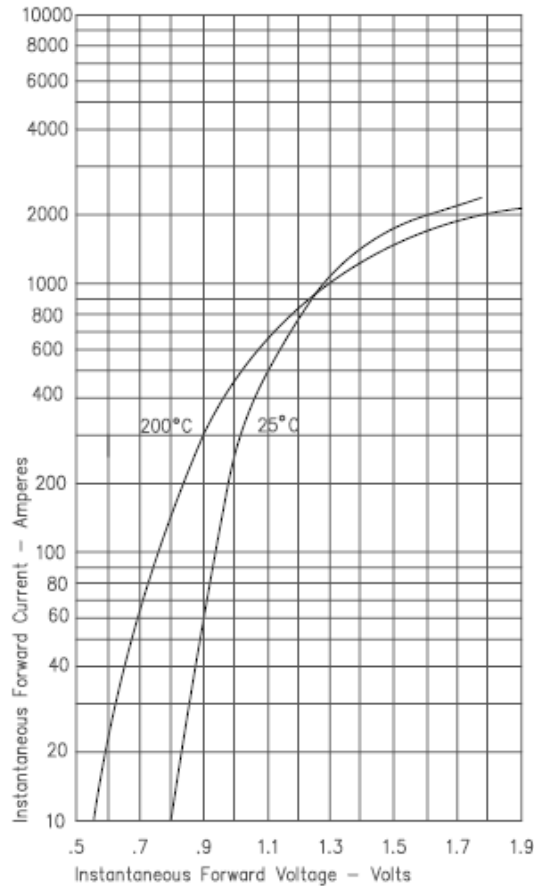


FIGURE 2

TYPICAL REVERSE CHARACTERISTICS

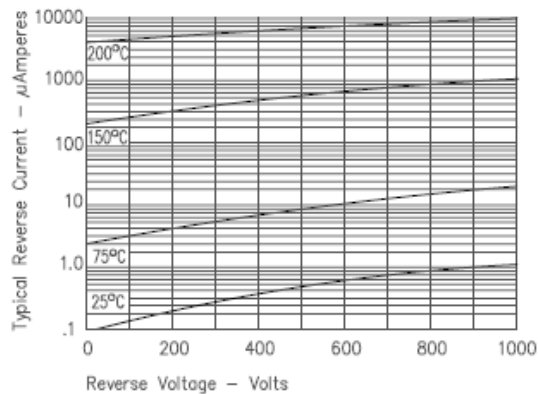


FIGURE 3

FORWARD CURRENT DERATING

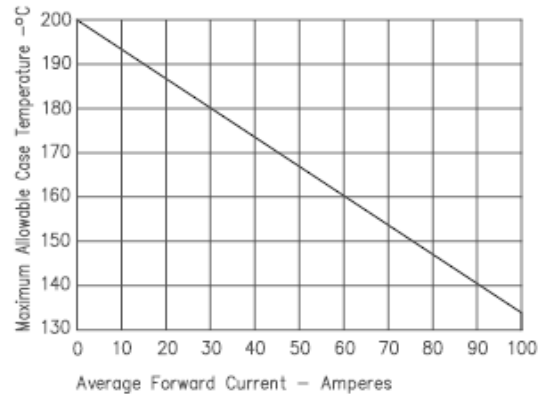


FIGURE 5

TRANSIENT THERMAL IMPEDANCE

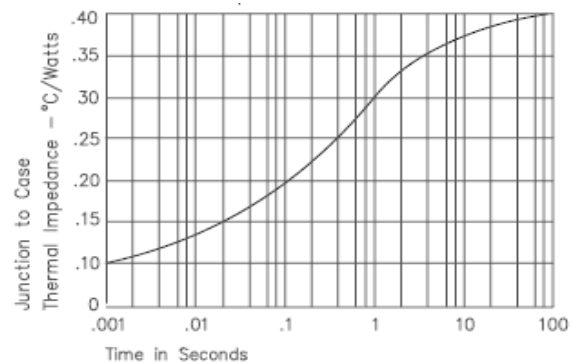
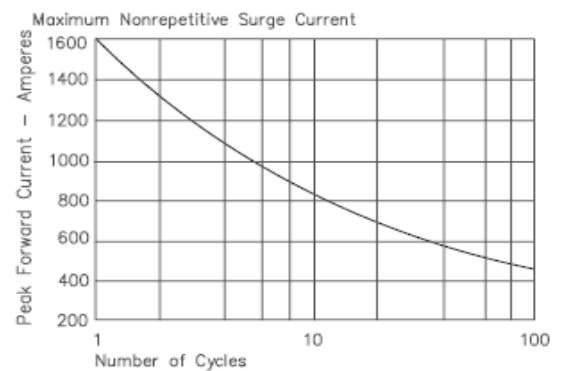


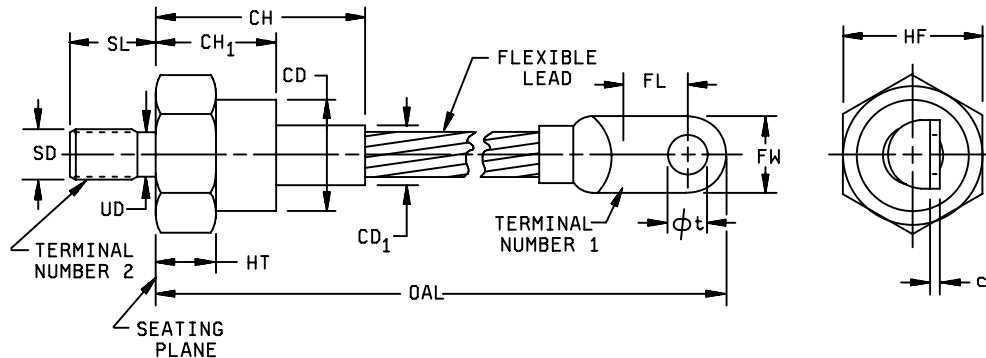
FIGURE 7

MAXIMUM NONREPETITIVE SURGE CURRENT



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PACKAGE DIMENSIONS



NOTES:

- Dimensions are in inches.
- Millimeter equivalents are given for general information only.
- Complete threads to extend to within 2.5 threads of seating plane.
- 375-24 UNF-2A. Maximum pitch diameter of plated threads shall be basic pitch diameter (.3479 inch (8.837 mm) reference).
- A chamfer or undercut on one or both ends of hexagonal portions is optional.
- Minimum flat.
- For marking (see 3.5).
- The body of the device, with the exception of the hexagon and flexible lead extensions, lies within cylinder defined by CD₁ and CH, CD₁ not to exceed actual HF.
- Terminal shape is optional.
- In accordance with ASME Y14.5M, diameters are equivalent to ϕx symbology.

Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
CD	.625	1.000	15.88	25.40	8
CD ₁		.500		12.70	
CH		1.750		44.45	
CH ₁		1.140		28.96	
c	.050	.120	1.27	3.05	
FL	.300	.450	7.62	11.43	6
FW		.670		17.02	
HF	1.031	1.063	26.19	27.00	
HT	.125	.500	3.18	12.70	5
OAL	4.300	5.065	109.22	128.65	
SD					4
SL	.605	.645	15.37	16.38	
UD	.343	.373	8.71	9.47	
ϕ_t	.250	.310	6.35	7.87	4

Physical dimensions