Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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TECHNICAL DATA SHEET

6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http://www.microsemi.com

HIGH RELIABILITY SILICON POWER RECTIFIER

Qualified per MIL-PRF-19500/211

- ***Glass Passivated Die***
- ***Glass to Metal Header Construction***
- ***Rugged Construction***
- ***High Surge Current Capability***

DEVICES

1N3164	**1N3172**	**1N3164R**	**1N3172R**
1N3168	**1N3174**	**1N3168R**	**1N3174R**
1N3170		**1N3170R**	

LEVELS

JAN
JANTX
JANTXV

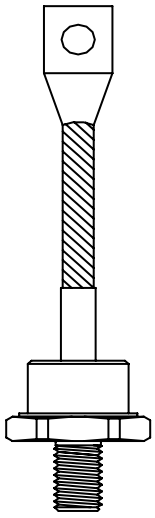
ABSOLUTE MAXIMUM RATINGS (T_C = +25°C unless otherwise noted)

Parameters / Test Conditions			Symbol	Value	Unit
Peak Repetitive Reverse Voltage	1N3164 1N3168 1N3170 1N3172 1N3174	1N3164R 1N3168R 1N3170R 1N3172R 1N3174R	V_{RWM}	200 400 600 800 1000	V
Average Forward Current, T_C = 150°			I_F	200	A
Average Forward Current, T_C = 120°			I_F	300	A
Peak Surge Forward Current @ t_p = 8.3ms, half sinewave, T_C = 200°C			I_{FSM}	6250	A
Thermal Resistance, Junction to Case			$R_{\theta JC}$	0.20	°C/W
Typical Thermal Resistance			$R_{\theta CS}$	0.80	°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} = 940A, T_C = 25°C			V_{FM}		1.55	V
Reverse Current						
V_{RM} = 200, T_C = 25°C V_{RM} = 400, T_C = 25°C V_{RM} = 600, T_C = 25°C V_{RM} = 800, T_C = 25°C V_{RM} = 1000, T_C = 25°C	1N3164 1N3168 1N3170 1N3172 1N3174	1N3164R 1N3168R 1N3170R 1N3172R 1N3174R	I_{RM}		10	mA
Reverse Current						
V_{RM} = 200, T_C = 175°C V_{RM} = 400, T_C = 175°C V_{RM} = 600, T_C = 175°C V_{RM} = 800, T_C = 175°C V_{RM} = 1000, T_C = 175°C	1N3164 1N3168 1N3170 1N3172 1N3174	1N3164R 1N3168R 1N3170R 1N3172R 1N3174R	I_{RM}		30	mA

Note:



DO-205AB (DO-9)

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GRAPHS

FIGURE 1
TYPICAL FORWARD CHARACTERISTICS

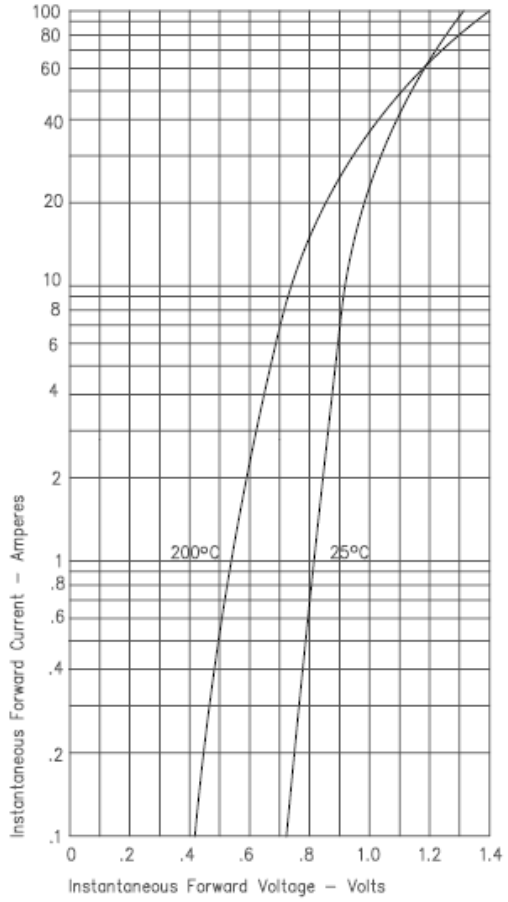


FIGURE 2
TYPICAL REVERSE CHARACTERISTICS

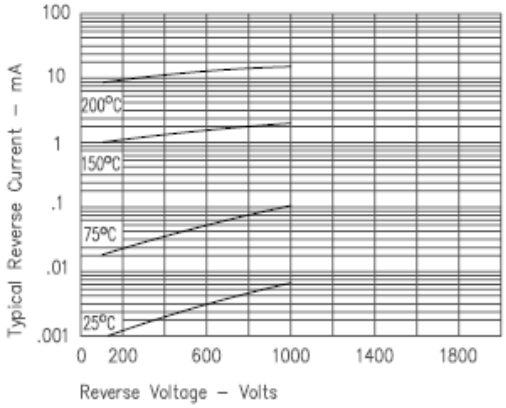


FIGURE 3
FORWARD CURRENT DERATING

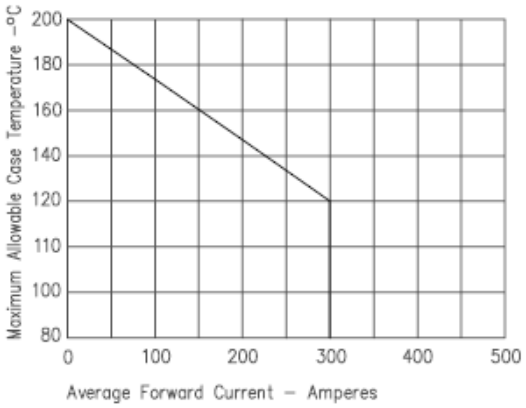
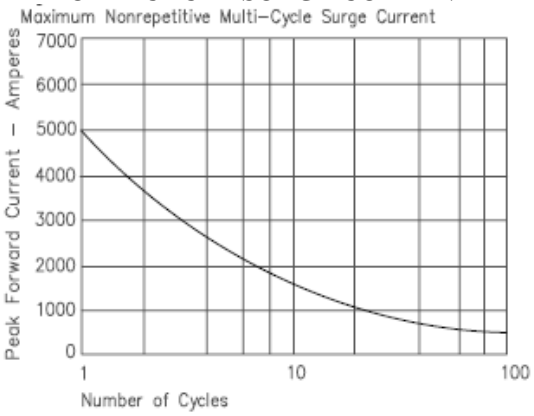


FIGURE 5
MAXIMUM NONREPETITIVE MULTI-CYCLE SURGE CURRENT



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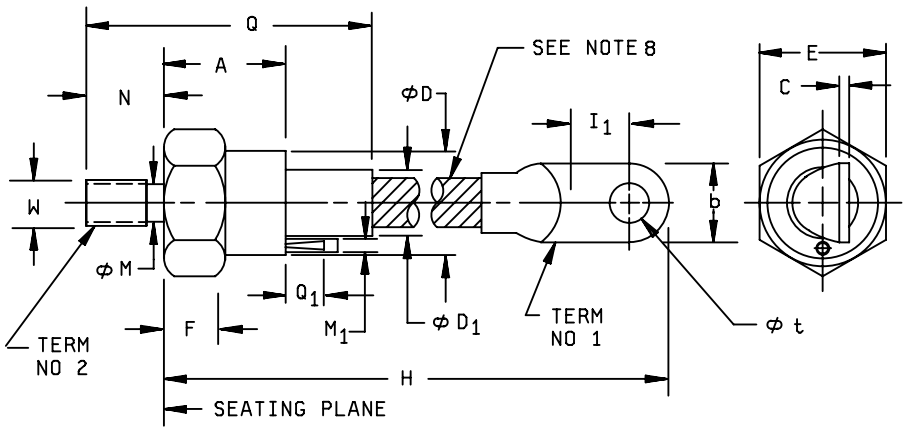
PACKAGE DIMENSIONS



NOTES:

1. Metric equivalents are given for general information only.
2. Complete threads to extend to within 2.5 threads of seating plane.
3. .750-16 UNF-2A. Maximum pitch diameter of plated threads shall be basic pitch diameter. .7094 (18.019 mm) ref. (Screw Thread Standards for Federal Services) FED-STD-H28.
4. Angular orientation of terminal and tabulation with respect to hex base is undefined. Square or radius on end of terminal is undefined.
5. A chamfer (or undercut) on one or both ends of hexagonal portions is optional.
6. Tabulation optional.
7. Minimum flat.
8. Flexible leads.

Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
A		1.520		38.10	4
B	.530	.755	13.46	19.18	
C	.063	.172	1.60	4.37	
ϕD		1.100		27.94	
ϕD1		.600		15.24	
E	1.218	1.252	30.94	31.75	
F	.250	.562	6.35	14.27	5
H	5.125	6.750	130.18	171.45	
I1	.375		9.53		7
ϕM	.660	.745	16.76	18.92	2
M1		.125		3.18	6
N	.793	.828	20.14	21.03	
Q		2.300		57.15	
Q1		.375		9.53	6
ϕt	.265	.350	6.73	3.89	
W					3

Physical dimensions for semiconductor devices