

# 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 POWER RECTIFIER

Qualified per MIL-PRF-19500/260

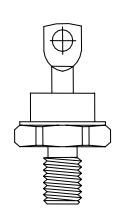
- Glass Passivated Die
- Glass to Metal Seal Construction
- 240 Amps Surge Rating
- VRRM to 1000 Volts

### **DEVICES**

1N1202A 1N1202AR 1N3671A 1N3671AR 1N1204A 1N1204AR 1N3673A 1N3673AR 1N1206A 1N1206AR JAN
JANTX
JANTXV

### **ABSOLUTE MAXIMUM RATINGS** (T<sub>C</sub> = +25°C unless otherwise noted)

Parameters / Test Conditions			Symbol	Value	Unit
Peak Repetitive Reverse Voltage	1N1202A 1N1204A 1N1206A 1N3671A 1N3673A	1N1202AR 1N1204AR 1N1206AR 1N3671AR 1N3673AR	$V_{ m RWM}$	200 400 600 800 1000	V
Average Forward Current, $T_C = 150^\circ$			$I_{F}$	12	A
Peak Surge Forward Current @ $t_p = 8.3$ ms, half sinewave, $T_C = 200$ °C, $T = 1/120$ s			$I_{FSM}$	240	A
Thermal Resistance, Junction to Case			$R_{\theta jc}$	2.0	°C/W
Operating Case Temperature Range			$T_{C}$	-65°C to 150°C	°C
Storage Temperature Range			$T_{stg}$	-65°C to 200°C	°C



DO-203AA (DO-4)

### ELECTRICAL CHARACTERISTICS ( $T_A = +25^{\circ}C$ , unless otherwise noted)

Parameters / Test Condition	s		Symbol	Min.	Max.	Unit
Forward Voltage $I_F = 38A$ , $T_j = 25$ °C*			$V_{\rm F}$		1.35	V
Forward Voltage $I_F = 240A, T_j = 25$ °C*			$V_{\mathrm{F}}$		2.3	V
Reverse Current						
$\begin{aligned} &V_R = 200,  T_j = 25^{\circ}\text{C} \\ &V_R = 400,  T_j = 25^{\circ}\text{C} \\ &V_R = 600,  T_j = 25^{\circ}\text{C} \\ &V_R = 800,  T_j = 25^{\circ}\text{C} \\ &V_R = 1000,  T_j = 25^{\circ}\text{C} \end{aligned}$	1N1202A 1N1204A 1N1206A 1N3671A 1N3673A	1N1202AR 1N1204AR 1N1206AR 1N3671AR 1N3673AR	$I_R$		5	μА
Reverse Current						
$\begin{split} &V_R = 200, T_j = 150^{\circ}\text{C} \\ &V_R = 400, T_j = 150^{\circ}\text{C} \\ &V_R = 600, T_j = 150^{\circ}\text{C} \\ &V_R = 800, T_j = 150^{\circ}\text{C} \\ &V_R = 1000, T_j = 150^{\circ}\text{C} \end{split}$	1N1202A 1N1204A 1N1206A 1N3671A 1N3673A	1N1202AR 1N1204AR 1N1206AR 1N3671AR 1N3673AR	${ m I_R}$		1.0	mA

<sup>\*</sup> Pulse test: Pulse width 300  $\mu sec$ , Duty cycle 2%

Note:



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## **GRAPHS**

# FIGURE 1 TYPICAL FORWARD CHARACTERISTICS

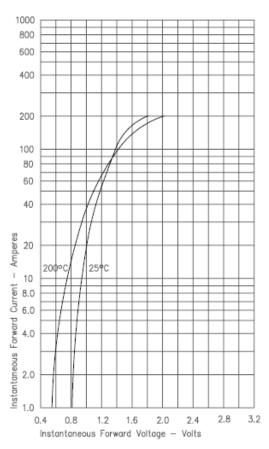
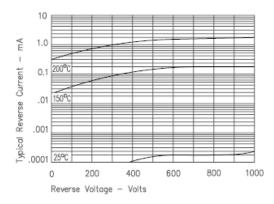


FIGURE 2
TYPICAL REVERSE CHARACTERISTICS



# FIGURE 3 FORWARD CURRENT DERATING

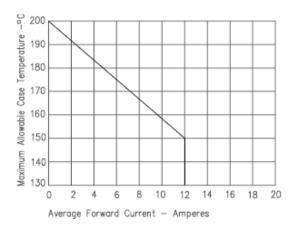
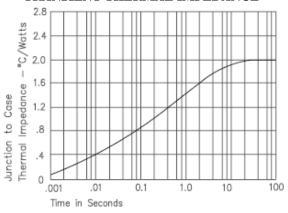


FIGURE 5
TRANSIENT THERMAL IMPEDANCE



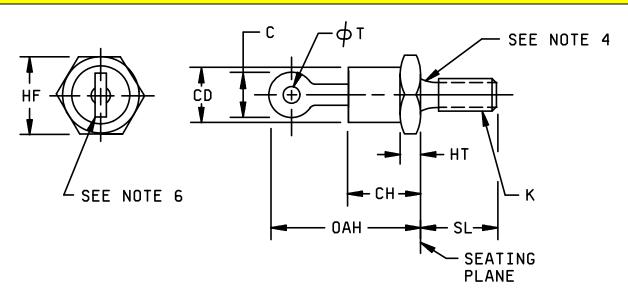


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## PACKAGE DIMENSIONS



#### **NOTES:**

- 1. Dimensions are in inches.
- 2. Millimeters are given for general information only.
- 3. Units must not be damaged by torque of 15 inch-pounds applied to 10-32NF-2B nut assembled on thread
- 4. Diameter of unthreaded portion .189 inch (4.80 mm) max and .163 inch (4.14 mm) min.
- 5. Complete threads to extend to within 2.5 threads of seating plane.
- 6. Angular orientation of this terminal is undefined.
- 7. Max pitch diameter of plated threads shall be basic pitch diameter .169 inch (4.31 mm) reference FED-STD-H28 (Screw Thread Standards for Federal Services.)
- 8. The A.S.A. thread reference is 10-32UNF2A.
- 9. Terminal shape is unrestricted.
- 10. Reversed (anode to stud) units shall be marked with an R following the last digit in the type number
- 11. In accordance with ASME Y14.5M, diameters are equivalent to \$\phi\$x symbology.

Ltr	Inches		Millir	Notes	
	Min	Max	Min	Max	
CH		.405		10.29	
CD		.424		10.77	
HF	.424	.437	10.77	11.10	
HT	.075	.175	1.90	4.44	
OAH		.800		20.32	
C		.250		6.35	9
φТ	.060		1.52		
SL	.422	.453	10.72	11.51	
K					3,5,7

## Physical dimensions (DO-203AA, formerly DO-4)

1N1202A, 1N1204A, 1N1206A, 1N3671A, 1N3673A and AR versions, and 1N1124A, 1N1126A, 1N1128A, and RA versions 1N3649, 1N3650, and R versions.

T4-LDS-0136 Rev. 1 (091679)

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