



**SOLID STATE INC.**

46 FARRAND STREET  
BLOOMFIELD, NEW JERSEY 07003

[www.solidstateinc.com](http://www.solidstateinc.com)

# **IN3615 SERIES**

## **medium power silicon rectifiers**

### **16 Amp DO-4 Rectifiers**

- Voltage ratings from 50 to 1,000 volts
- High surge current capability
- Low thermal impedance
- High temperature rating

### ELECTRICAL SPECIFICATIONS

Series	1N3615 to 1N3624	Conditions
$I_F(AV)$ Max. average forward current	16A*	1 phase operation, $T_C = 150^\circ C$
$I_{FM}(\text{surge})$ Max. peak one cycle, non-repetitive surge current	300A*	60 Hz half sine wave, following any rated load condition
$V_{FM}$ Max. peak forward voltage drop	1.2V*	Rated $I_F(AV)$ (50A peak) $T_C = 150^\circ C$

### THERMAL-MECHANICAL SPECIFICATIONS

$T_J$ Max. operating junction temperature range	-65° to 200°C*	
$T_{stg}$ Max. storage temperature range	-65° to 200°C*	
$R_{\theta JC}$ Max. thermal resistance, junction-to-case	1°C/W	Dc operation
$R_{\theta CS}$ Thermal resistance, case to sink	0.60°C/W	Mounting surface flat, smooth, and greased
Mounting torque	Min. 12 lb-in. Max. 15 lb-in.	Non-lubricated threads
Approximate weight	1/4 oz.	

\*JEDEC registered values

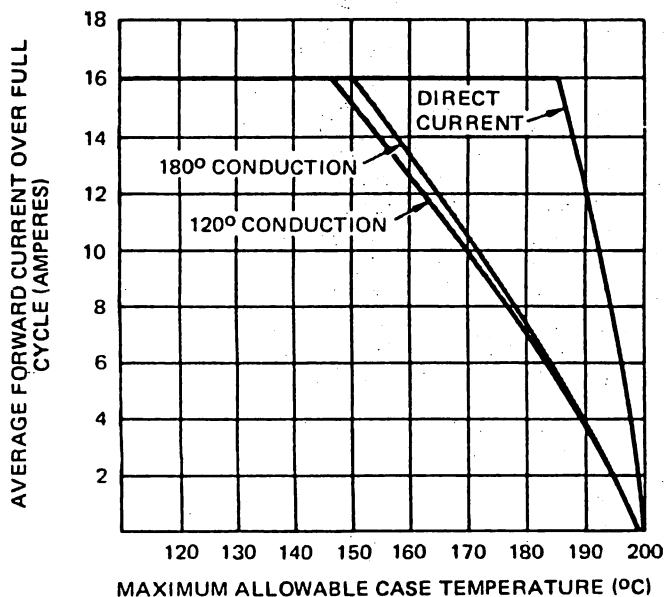


Fig. 1 - Average Forward Current Vs Case Temperature (Resistive Load)

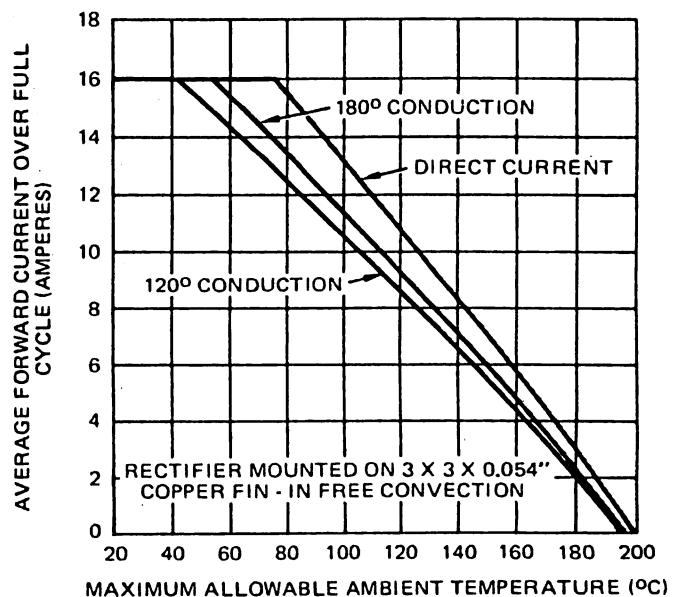


Fig. 2 - Average Forward Current Vs Ambient Temperature (Resistive Load)

### VOLTAGE RATINGS

PART NUMBER ①	VRM(REP) MAX. REPETITIVE PEAK REVERSE VOLTAGE (V)	VRM(NON-REP) MAX. NON-REPETITIVE PEAK REVERSE VOLTAGE (V)	VR(RMS) MAX. RMS INPUT VOLTAGE (V)	VR MAX. DC BLOCKING VOLTAGE (V)	IR(AV) MAX. AVERAGE REVERSE CURRENT @ MAX. RATED IF(AV) AND VRM(REP), T <sub>C</sub> = 150°C (1 PHASE OPERATION) (mA)
1N3615	50*	100*	35*	50*	3 *
1N3616	100*	200*	70*	100*	2.5 *
1N3617	150*	300*	105*	150*	2.25*
1N3618	200*	350*	140*	200*	2 *
1N3619	300*	500*	210*	300*	1.75*
1N3620	400*	600*	280*	400*	1.5 *
1N3621	500*	700*	350*	500*	1.25*
1N3622	600*	800*	420*	600*	1.0 *
1N3623	800*	1000*	560*	800*	0.75*
1N3624	1000*	1200*	700*	1000*	0.6 *

① Cathode-to-case. For anode-to-case add suffix "R" to part number, i.e. 1N3615R.

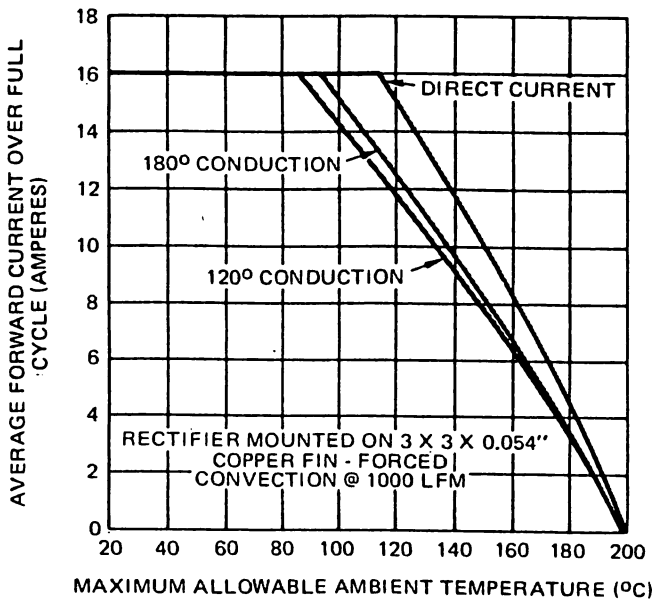


Fig. 3 - Average Forward Current Vs Ambient Temperature (Resistive Load)

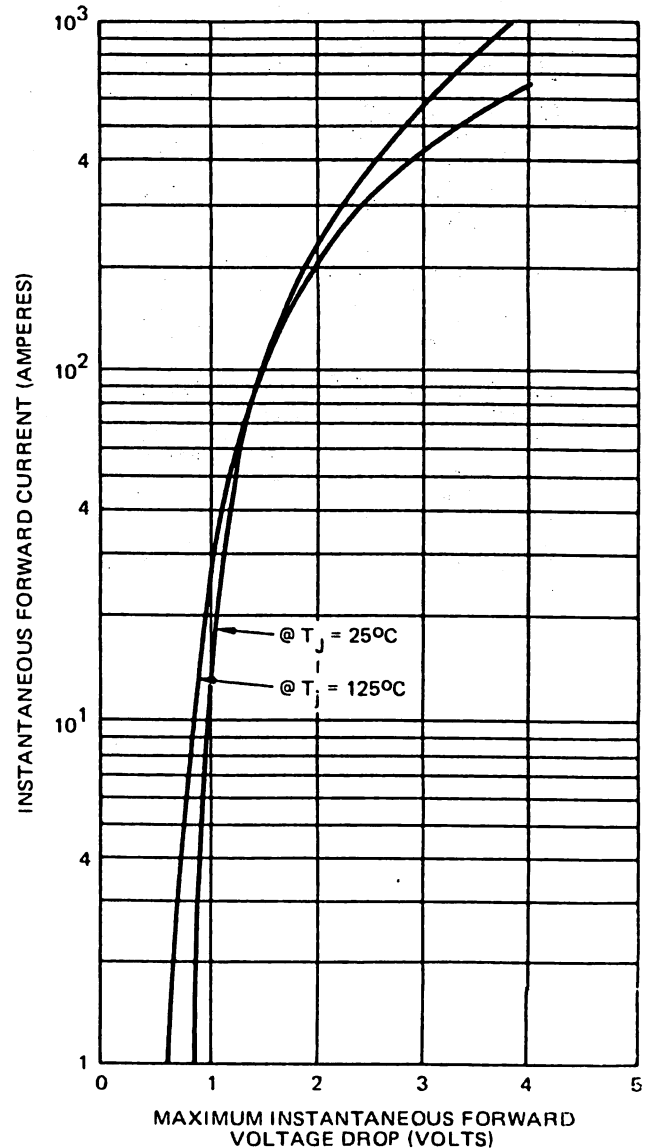


Fig. 4 - Maximum Forward Voltage Drop Vs Forward Current



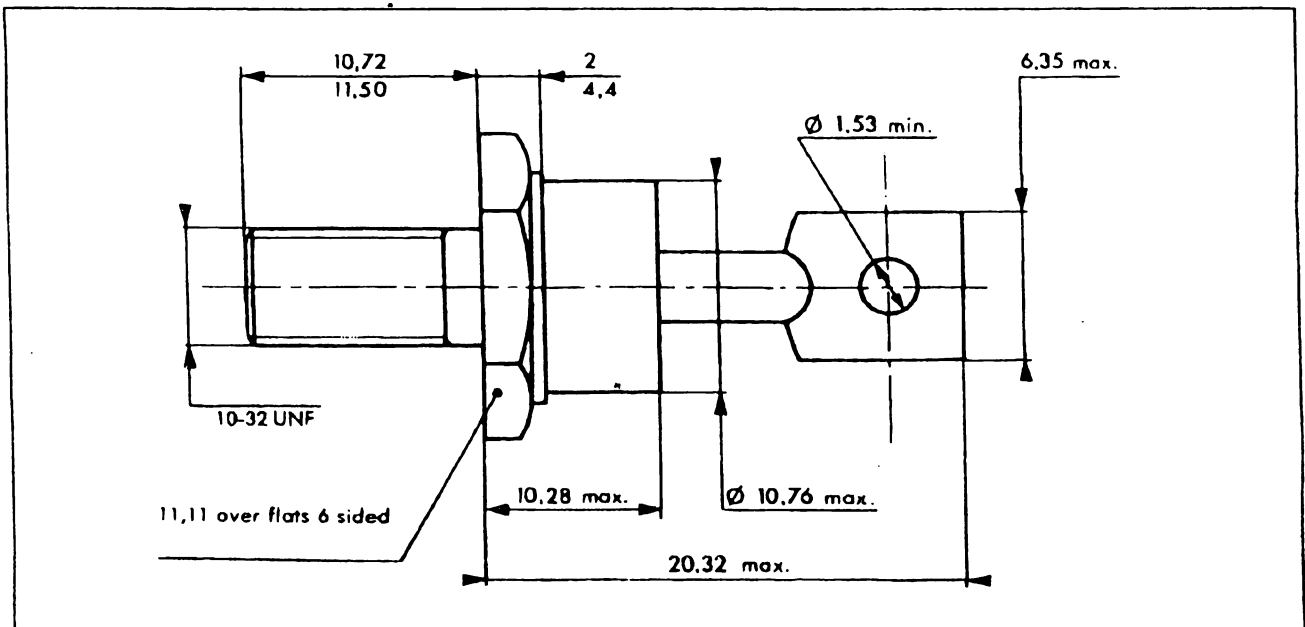
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PACKAGE MECHANICAL DATA

DO 4 Metal



Marking : Cathode connected to case : type number  
Anode connected to case : type number + suffix R