

# New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.  
SPRINGFIELD, NEW JERSEY 07081  
U.S.A.

**IN1612-16,R**

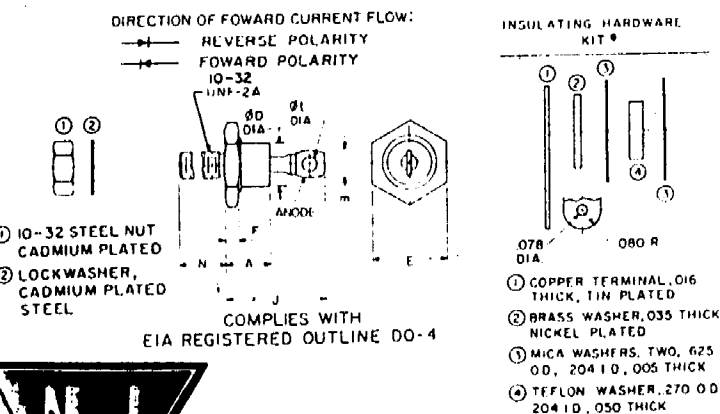
TELEPHONE: (973) 376-2922  
(212) 227-6005  
FAX: (973) 376-8960

## electrical ratings and specifications (60 cps. Resistive or Inductive Load)

	IN1612 IN1612R	IN1613 IN1613R	IN1614† IN1614R	IN1615‡ IN1615R	IN1616‡ IN1616R	
Max. Allow. Transient Peak Reverse Voltage (Non-recurrent, 5 millisecc. max. duration, $T_j = 0$ to $190^\circ\text{C}$ )	100	200	350	600	800	Volts
Max. Allow. Peak Reverse Voltage (Repetitive)*	50	100	200	400	600	Volts
Max. Allow. RMS Voltage	35	70	140	280	420	Volts
Max. Allow. DC Blocking Voltage**	50	100	200	400	600	Volts
Max. Allow. Forward Current (Single Phase $+150^\circ\text{C}$ stud temp.)	←————— 5 amperes —————→					
Max. Allow. Peak One Cycle Surge Current (non-recurrent)	←————— 150 amperes —————→					
$I^2t$ Rating [for $t$ greater than .0008 sec. and less than .0083 sec. (non-recurrent)]	←————— 25 ampere <sup>2</sup> sec. — min. rating —————→ ( $T_j = -65^\circ\text{C}$ to $+190^\circ\text{C}$ )					
Max. Full Load Voltage Drop (Single Phase, Full Cycle Average $+150^\circ\text{C}$ stud temp.)	←————— .64 Volts —————→					
Max. Leakage Current at Full Load (Single Phase, Full Cycle Average $150^\circ\text{C}$ stud temp.)	1.0	1.0	1.0	1.0	1.0	ma
Max. Thermal Resistance (junction to stud)	←————— $7.0^\circ\text{C}/\text{Watt}$ —————→					
Junction Operating and Storage Temp. Range	←————— $-65^\circ\text{C}$ to $+190^\circ\text{C}$ —————→					
Stud Torque	Minimum 12 in.-lbs.; Maximum 15 in.-lbs.					

\*Maximum voltages apply with a heat sink thermal resistance of  $22^\circ\text{C}/\text{Watt}$  or less at maximum rated junction temperature.  
 \*\*Maximum voltages apply with a heat sink thermal resistance of  $7^\circ\text{C}/\text{Watt}$  or less at maximum rated junction temperature.  
 †Available as MIL-S-19600/162 devices.

### OUTLINE DRAWING



SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN.	MAX.	MIN.	MAX.	
A		.405		10.29	
φD		.424		10.77	
E	.424	.437	10.77	11.10	
F	.075	.175	1.91	4.45	
J		.800		20.32	1
m		.250		6.35	
N	.422	.453	10.72	11.51	
φL	.060		1.52		2
W					

- NOTES:  
 1. Angular orientation of this terminal is undefined.  
 2. 10-32 UNI-2A. Maximum pitch diameter of plated threads shall be basic pitch diameter (.1697", 4.29 MM). Ref: (Screw thread standards for Federal Services 1957) Handbook H28, P1



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.