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CONTROLLED AVALANCHE

Silicon Rectifier

35A Avg. Up to 1200V

1N4529-30

MAXIMUM ALLOWABLE RATINGS

Type	Repetitive & Working Peak Reverse Voltage* $V_{RM(rep)}$, $V_{RM(wkg)}$ $T_J = -65°C$ to $+175°C$ (Note: 1)	MINIMUM Avalanche Breakdown Voltage, BV_R, (5 mA test current at $T_J = 25°C$)	MAXIMUM Avalanche Breakdown Voltage, BV_R, (5 mA test current at $T_J = 25°C$)	Full-Load Reverse Current (full-cycle avg., 115°C T_C, 1 ϕ), $I_{R(AV)}$
	Volts**	Volts	Volts	Milliamperes**
1N4529,R	1000	1250	1550	2.5
1N4530,R	1200	1500	1930	2.0

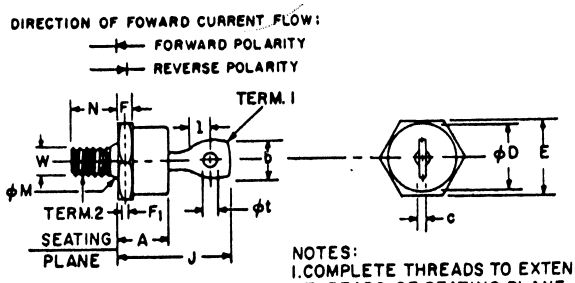
Average Forward Current, I_O ($T_C = +115°C$, single phase) ..... 35 Amperes**
Peak One-Cycle Surge Current (non-repetitive), I_{FM} (surge) ..... 500 Amperes**
Minimum I^2t Rating (see Curve 6) ..... 500 Ampere² seconds
Reverse Power Surge (non-repetitive, 10 μsec., square wave)
$T_J = +25°C$ ..... 12 Kilowatts
$T_J = +175°C$ ..... 4.5 Kilowatts
(For other conditions, see Curve 2)
Average DC Reverse Power in Breakdown Region ($-65°C \leq T_C \leq +115°C$) (Note: 2) ..... 20 Watts**
Peak Reverse Power in Breakdown Region (repetitive) (Note: 2) ..... 100 Watts
Forward Peak Voltage Drop, V_{FM} ($T_C = +115°C$, $I_O = 12$ ampere avg.) ..... 1.4 Volts**
Thermal Resistance, θ_{J-C} ..... 1.0°C/Watt
Operating Junction Temperature, T_J ..... −65°C to +175°C**
Storage Temperature, T_{stg} ..... −65°C to +200°C**
Stud Torque ..... 30 Lb-in
35 Kg-cm

*Maximum voltages apply with a heatsink thermal resistance of 8°C/watt, or less, at maximum rated junction temperature.
**Indicates values included in JEDEC Type Number Registration.

NOTES:
(1) $V_{RM(rep)}$ applies for a conventional AC to DC conversion application. $V_{RM(rep)}$ and $V_{RM(wkg)}$ can be considered unlimited providing that the additional reverse power generation is taken into account by allowing for its influence on the forward current rating. Considerations similar to voltage regulator diode applications would apply.
(2) These ratings assume no forward power dissipation. In applications requiring both forward and reverse average power dissipation, reduce case temperature as determined from the maximum case temperature versus average forward current curve by 2.0°C for every watt of average reverse power dissipation.
(3) Case temperature, Tc, is measured at the center of any one of the hex flats.

OUTLINE DRAWING

SYMBOL	INCHES MIN.	INCHES MAX.	MILLIMETERS MIN.	MILLIMETERS MAX.	NOTES
A		.450		11.43	
b		.375		9.53	2
c		.080		2.03	
ϕD		.667		16.94	
E	.667	.687	16.94	17.45	
F	.115	.200	2.92	5.08	
F_1	.060		1.52		
J		1.000		25.40	
l	.156		3.96		4
ϕM	.220	.249	5.59	6.32	1
N	.422	.453	10.72	11.51	
ϕt	.140	.175	3.56	4.45	
W					1,3



NOTES:
1. COMPLETE THREADS TO EXTEND TO WITHIN 2-1/2 THREADS OF SEATING PLANE.
2. ANGULAR ORIENTATION OF TERMINAL IS UNDEFINED.
3. 1/4-28 UNF-2A. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE BASIC PITCH DIAMETER (.2268", 5.74 MM) REF. (SCREW THREAD STANDARDS FOR FEDERAL SERVICES 1957) HANDBOOK H28 1957 P1.
4. MINIMUM FLAT.

EIA-NEMA STANDARD OUTLINE, NEMA SK-51-EIA RS-241.
INSULATING HARDWARE IS AVAILABLE UPON REQUEST.

COMPLIES WITH EIA REGISTERED OUTLINE DO-5

NJS

Quality Semi-Conductors