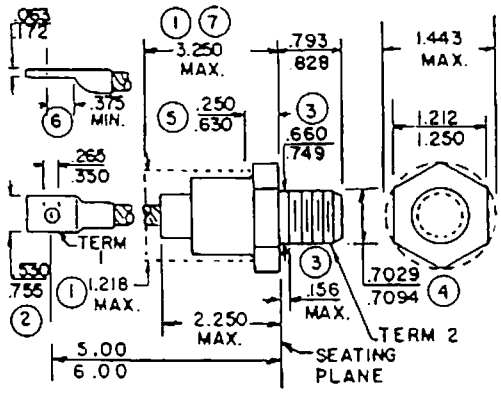
Silicon Power Rectifier

DO9



Standard polarity: Stud is Cathode
Reverse polarity: Stud is Anode

DO9 NOTES:

1. The device with exception of the hexagon, thread, and flexible lead extension lies within the cylinder defined by 1.218 and length 3.25.
2. Angular orientation of terminal with respect to hexagonal portion is undefined. Square or radius on end of terminal is optional.
3. Length of incomplete or undercut threads.
4. Pitch diameter of 3/4-16 UNF-2A (coated) threads (ASA B1.1-1960).
5. A chamfer (or undercut) on one or both ends of the hexagonal portion is optional.
6. Minimum flat.
7. Seated height with lead bent at right angle.

DO-9

JEDEC Types						Peak Reverse Voltage
1N4044	1N1660	1N1670	1N2054	1N3260		50V
1N4045	1N1661	1N1671	1N2055	1N3261	1N3735	100V
1N4046	1N1662	1N1672	1N2056	1N3262		150V
1N4047	1N1663	1N1673	1N2057	1N3263	1N3736	200V
1N4048			1N2058	1N3264		250V
1N4049	1N1664	1N1674	1N2059	1N3265	1N3737	300V
			1N2060	1N3266		350V
1N4050	1N1665	1N1675	1N2061	1N3267	1N3738	400V
			1N2062			450V
1N4051	1N1666	1N1676	1N2063	1N3268	1N3739	500V
1N4052			1N2064	1N3269	1N3740	600V
1N4053			1N2065	1N3270		700V
1N4054			1N2066	1N3271	1N3741	800V
1N4055			1N2067	1N3272		900V
1N4056			1N2068	1N3273	1N3742	1000V
				1N3274	1N3743	1200V
					1N3744	1400V

Add R suffix for reverse polarity.

- Glass to metal seal construction
- High surge current capability
- Soft recovery
- V_{RRM} 50 to 1400 Volts

Electrical Characteristics

Average forward current	$I_{F(AV)}$	275 Amps	T_C = 120°C, square wave, $R_{\theta JC}$ = 0.18°C/W
Maximum surge current	I_{FSM}	5000 Amps	8.3ms, half sine, T_J = 190°C
Max I^2t for fusing	I^2t	104125 A^2s	8.3ms
Max peak forward voltage	V_{FM}	1.3 Volts	I_{FM} = 300A; T_J = 25°C*
Max peak reverse current	I_{RM}	10 mA	V_{RRM}, T_J = 150°C
Max reverse current	I_{RM}	75 uA	V_{RRM}, T_J = 25°C

*Pulse test: Pulse width 300 μsec. Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temperature range	T_{STG}	−65°C to 190°C
Operating junction temp range	T_J	−65°C to 190°C
Maximum thermal resistance	$R_{\theta JC}$	0.18°C/W junction to case
Typical Thermal Resistance (greased)	$R_{\theta CS}$	.08°C/W case to sink
Mounting torque		300−325 inch pounds
Weight		8.5 ounces (240 grams) typical

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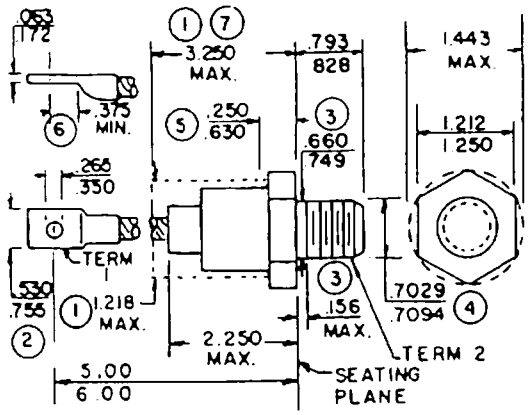
BLOOMFIELD, NEW JERSEY 07003
www.solidstateinc.com

Silicon Power Rectifier
1N3161 – 1N3177



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Standard Polarity: Stud is Cathode
Reverse Polarity: Stud is Anode

DO9

	Peak Reverse Voltage
1N3161	50V
1N3162	100V
1N3163	150V
1N3164	200V
1N3165	250V
1N3166	300V
1N3167	350V
1N3168	400V
1N3169	500V
1N3170	600V
1N3171,A	700V
1N3172,A	800V
1N3173,A	900V
1N3174,A	1000V
1N3175	1200V
1N3176	1400V
1N3177	1600V

Add R suffix for reverse polarity

- Glass to metal seal construction
- High surge current capability
- Rugged construction
- V_{RRM} 50–1600 Volts

Electrical Characteristics

Max average forward current	$I_{F(AV)}$	240 Amps	T_C = 149°C, Half sine wave, $R_{\theta JC}$ = 0.20°C/W
Max surge current	I_{FSM}	3000 Amps	8.3ms, half sine, T_J = 200°C
Max. I^2t capability for fusing	I^2t	37,480^{2}S	less than 8.33ms
Max peak forward voltage	V_{FM}	1.25 Volts	IF = 240A: T_C = 25°C
Max peak reverse current	I_{RRM}	10mA	V_{RRM}, T_C = 150°C
Max peak reverse current	I_{RRM}	75 µA	V_{RRM}, T_C = 25°C
Max recommended operating frequency		7.5 kHz	

Thermal and Mechanical Characteristics

Operating junction temp range	T_J	-65°C to 200°C
Storage temperature range	T_{STG}	-65°C to 200°C
Maximum thermal resistance	$R_{\theta JC}$	0.20°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	.08°C/W Case to sink
Max mounting torque		300–325 inch pounds
Weight		8.5 ounces (240 grams) typical

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