



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
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2R3S THRU 20R3S

8 AMPS
20 – 200 VOLTS
35 nsec
HYPER FAST RECTIFIER

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

R3S

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 └───┘ **Screening^{3/}** — = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

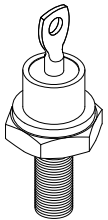
Family/Voltage

- 2 = 20V
- 3 = 30V
- 4 = 40V
- 5 = 50V
- 7 = 70V
- 10 = 100V
- 12 = 125V
- 15 = 150V
- 20 = 200V

- Features:**
- Hyper Fast Recovery: 35nsec Maximum
 - Low Forward Voltage Drop
 - Low Reverse Leakage Current
 - Single Chip Construction
 - Hermetically Sealed Package
 - Metalurgically Bonded Construction
 - TX, TXV, and S-Level Screening Available ^{2/}

Maximum Ratings ^{2/}	Symbol	Value	Units	
Peak Repetitive Reverse Voltage	2R3S	20	Volts	
	3R3S	30		
	4R3S	40		
	5R3S	V_{RRM}		50
	7R3S	V_{RWM}		70
	10R3S	V_R		100
	12R3S			125
	15R3S			150
	20R3S			200
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ C$)	I_o	8	Amps	
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$)	I_{FSM}	200	Amps	
Operating & Storage Temperature	T_{OP} & T_{STG}	-65 to +175	°C	
Maximum Total Thermal Resistance Junction to Case	R_{θJC}	1.5	°C/W	

DO-4:



Notes:

- 1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.
- 2/ Unless Otherwise Specified, All Maximum Ratings/Electrical Characteristics @25°C.
- 3/ Screened to MIL-PRF-19500.



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2R3S THRU 20R3S

Electrical Characteristics	Symbol	Max	Units
Instantaneous Forward Voltage Drop ($I_F=8A$, $T_A=25^\circ C$, 300 μ sec pulse)	V_F	0.90	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A=25^\circ C$, 300 μ sec pulse minimum)	I_{R1}	100	μA
Reverse Leakage Current (Rated V_R , $T_A=100^\circ C$, 300 μ sec pulse minimum)	I_{R2}	2.0	mA
Reverse Recovery Time ($T_A=25^\circ C$, $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$)	t_{RR}	35	nsec
Typical Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ C$, $f = 1MHz$)	C_J	300	pF

Notes:

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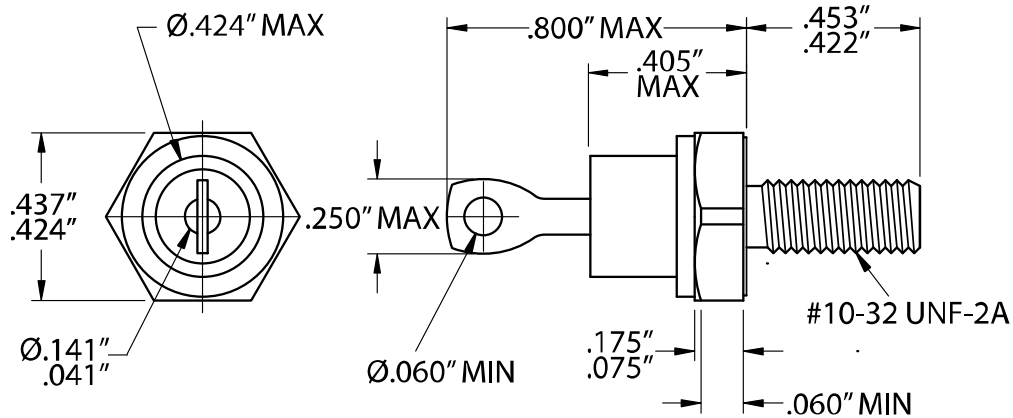
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Case Outline: DO-4

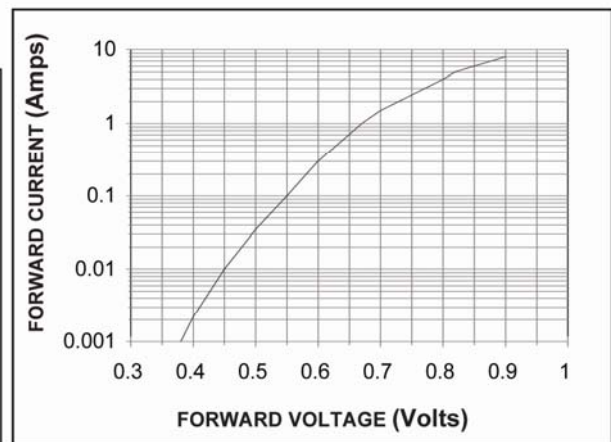
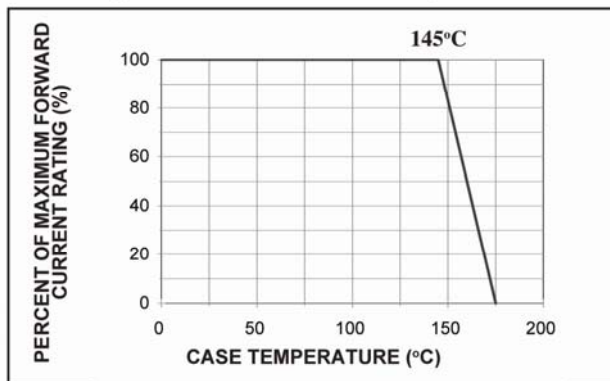
Stud: Cathode

Lead: Anode



TYPICAL OPERATING CURVES

$T_A = 25^\circ C$ Unless otherwise specified



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RC0029D

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