



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

R3S

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

2R3S THRU 20R3S

8 AMPS

20 – 200 VOLTS

35 nsec

HYPER FAST RECTIFIER

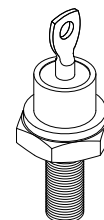
Features:

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

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.

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

DOC



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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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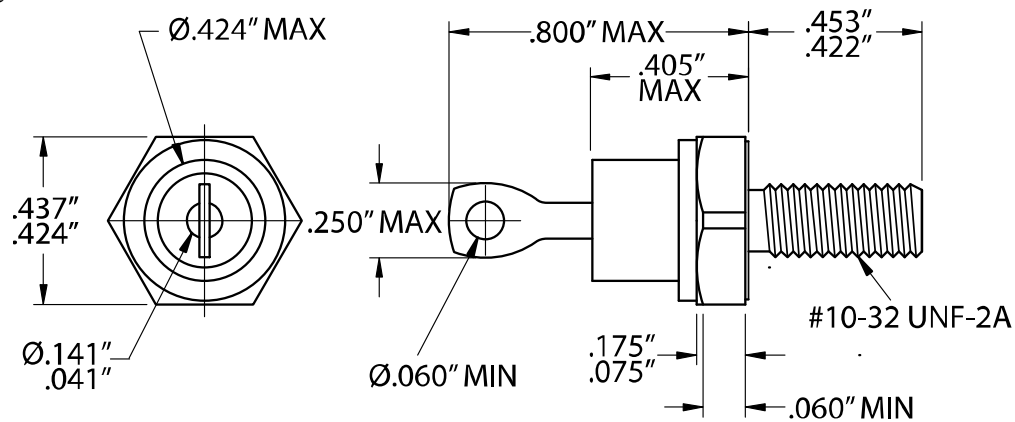
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Case Outline: DO-4

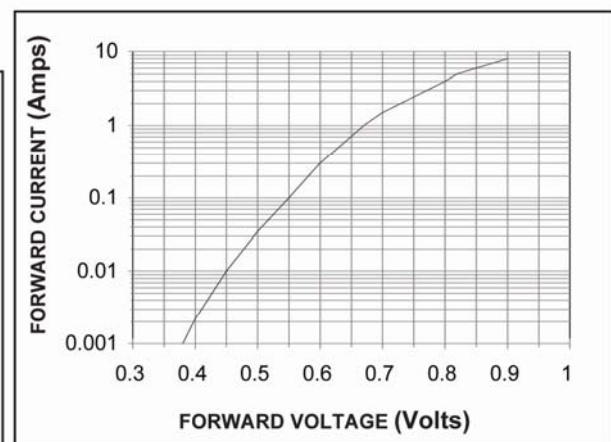
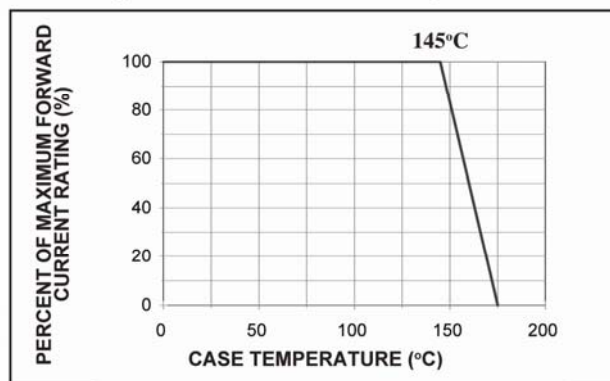
Stud: Cathode

Lead: Anode



TYPICAL OPERATING CURVES

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



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