



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR620

Screening ^{2/} ___ = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

Leg Bend Option ___ = Straight

(See Figure 1)

DB = Down Bend

UB = Up Bend

Package J = TO-257

M = TO-254

Z = TO-254Z

Pin Configuration ___ = Normal

(See Table 1)

R = Reverse

Family/Voltage SDR620 = 100V

SDR621 = 150V

SDR622 = 200V

SDR620J, M & Z

Thru

SDR622J, M & Z

20A, 35nsec, 100-200 V

Hyper Fast Rectifier

Features:

- Hyper Fast Recovery: 35nsec Maximum ^{3/}
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Isolated Package
- Higher Voltages Available
- Available in Centertap Versions
- Replaces 1N5816 and 1N5816R
-
- TX, TXV, and S-Level Screening Available ^{2/}

Maximum Ratings ^{4/}		Symbol	Value	Units
Peak Repetitive Reverse Voltage	SDR620J, M & Z	V_{RRM}	100	Volts
	SDR621J, M & Z	V_{RWM}	150	
	SDR622J, M & Z	V_R	200	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_A = 25^\circ\text{C}$)		I_o	20	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$, per leg)		I_{FSM}	300	Amps
Operating & Storage Temperature		$T_{OP} \text{ \& } T_{STG}$	-65 to +200	$^\circ\text{C}$
Maximum Total Thermal Resistance Junction to Case	J (TO-257)	$R_{\theta JC}$	2.1	$^\circ\text{C/W}$
	M (TO-254)		1.2	
	Z (TO-254Z)		1.2	

Notes:

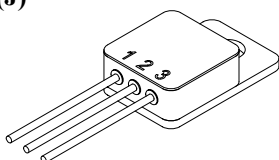
1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

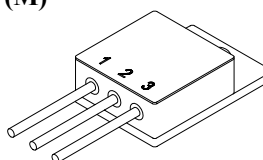
3/ Recovery Conditions: $I_F = 500 \text{ mA}$, $I_R = 1 \text{ Amp}$, $I_{RR} = 250 \text{ mA}$.

4/ Unless Otherwise Specified, All Maximum Ratings/Electrical Characteristics @25°C.

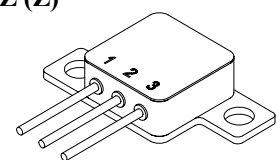
TO-257 (J)



TO-254 (M)



TO-254Z (Z)



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

DATA SHEET #: RC0031C

DOC



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SDR620J, M & Z

Thru

SDR622J, M & Z

Electrical Characteristics (per leg) ^{4/}		Symbol	Max	Units
Instantaneous Forward Voltage Drop	300µsec Pulse, I _F = 10A, T _A = 25 °C	V _{F1}	1.00	V _{DC}
	300µsec Pulse, I _F = 20A, T _A = 25 °C	V _{F2}	1.20	
	300µsec Pulse, I _F = 10A, T _A = 100 °C	V _{F3}	0.90	
	300µsec Pulse, I _F = 10A, T _A = -55 °C	V _{F4}	1.15	
Reverse Leakage Current (Rated V _R , 300µsec Pulse Minimum)	T _A = 25 °C	I _{R1}	10	µA
	T _A = 100 °C	I _{R2}	100	µA
Reverse Recovery Time (I _F = 500 mA, I _R = 1 Amp, I _{RR} = 250 mA)		t _{RR}	35	nsec
Junction Capacitance (V _R = 10V _{DC} , T _A = 25°C, f = 1MHz)		C _J	250	pF

Notes:

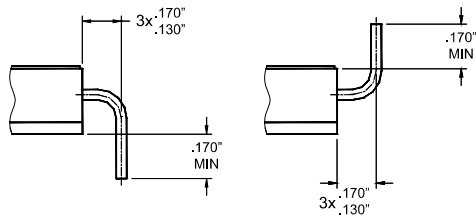
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3/ Recovery Conditions: I_F = 500 mA, I_R = 1 Amp, I_{RR} = 250 mA.

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Figure 1- Optional Lead Bends

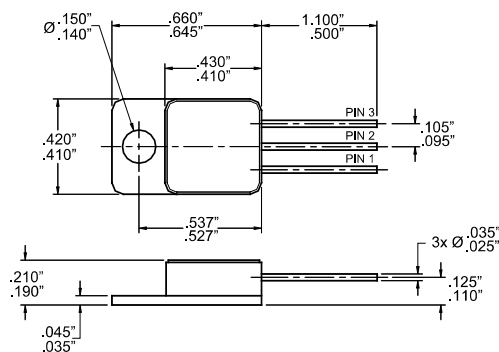


Suffix JDB, MDB & ZDB Suffix JUB, MUB & ZUB

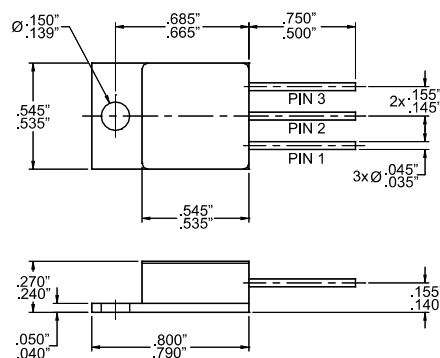
Table 1- PIN ASSIGNMENT

Code	Configuration	Pin 1	Pin 2	Pin 3
—	Normal	Cathode	Anode	Anode
R	Reverse	Cathode	Cathode	Anode

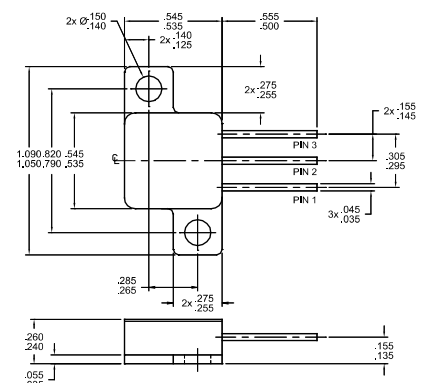
TO-257 (Suffix J) Outline:



TO-254 (Suffix M) Outline:



TO-254Z (Suffix Z) Outline:



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