



**SOLID STATE DEVICES, INC.**

14701 Firestone Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773

**SDR620CTM & Z  
 thru  
 SDR622CTM & Z**

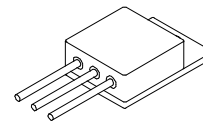
**40 AMPS  
 100 - 200 VOLTS  
 35 nsec  
 HYPER FAST  
 COMMOM CATHODE  
 CENTERTAP RECTIFIER**

**Designer's Data Sheet**

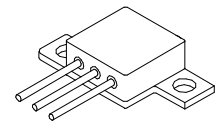
**FEATURES:**

- Replaces 1N6657, 1N6658, 1N6659 Devices
- Hyper Fast Recovery: 35 nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach available
- Ultrasonic Aluminum Wire Bonds
- TX, TXV and Space Level Screening Available

TO-254 (M)



TO-254Z (Z)



**Available in Following Configurations:**<sup>3/</sup>

SDR620CTM, SDR620CTZ, SDR620CAM, SDR620CAZ, SDR620DM, SDR620DZ  
 SDR621CTM, SDR621CTZ, SDR621CAM, SDR621CAZ, SDR621DM, SDR621DZ  
 SDR622CTM, SDR622CTZ, SDR622CAM, SDR622CAZ, SDR622DM, SDR622DZ

Maximum Ratings		SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage <u>2/</u>	SDR620CTM & Z SDR621CTM & Z SDR622CTM & Z	$V_{RRM}$ $V_{RWM}$ $V_R$	100 150 200	Volts
Average Rectified Forward Current (Resistive load, 60Hz, Sine Wave, $T_A = 25^\circ\text{C}$ ) <u>1/</u>		$I_o$	40	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$ , per leg) <u>1/</u>		$I_{FSM}$	300	Amps
Operating and Storage Temperature		$T_{OP} \& T_{stg}$	-65 TO +200	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case, each individual diode Junction to Case, <u>1/</u>		$R_{qJC}$	1.2 0.8	$^\circ\text{C/W}$

**NOTES:**

- 1/ Both Legs Tied Together
- 2/ Higher Voltages Available
- 3/ Consult Factory for Doubler Specifications

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

**DATA SHEET #: RC0027E**

**PM**

# SDR620CTM & Z thru SDR622CTM & Z

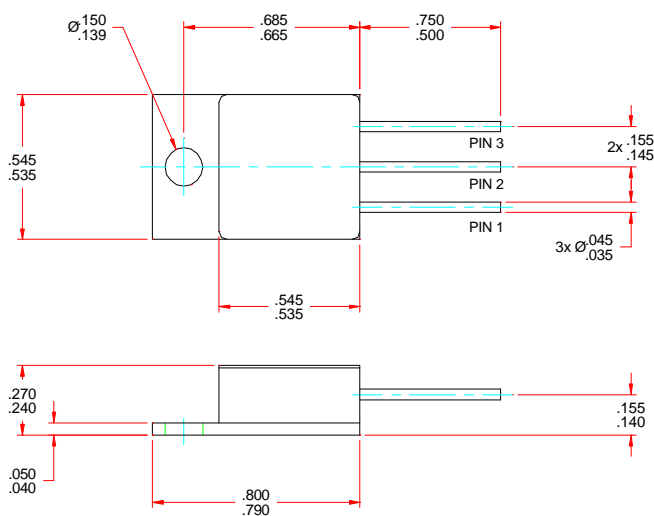


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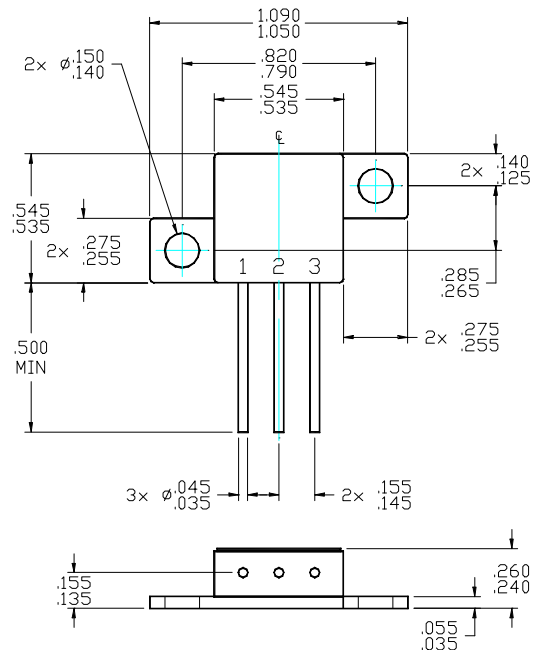
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Electrical Characteristics (Per Leg)	SYMBOL	MINIMUM	MAXIMUM	UNITS
<b>Instantaneous Forward Voltage Drop</b> ( $T_A = 25^\circ\text{C}$ , 300 - 500 $\mu\text{sec}$ Pulse )	$I_F = 10\text{A}$ $V_{F1}$	--	<b>1.0</b>	$V_{DC}$
	$I_F = 20\text{A}$ $V_{F2}$	--	<b>1.2</b>	
<b>Instantaneous Forward Voltage Drop</b> ( $I_F = 10\text{A}$ , 300 - 500 $\mu\text{sec}$ pulse )	$T_A = 100^\circ\text{C}$ $V_{F3}$	--	<b>0.9</b>	$V_{DC}$
	$T_A = -55^\circ\text{C}$ $V_{F4}$	--	<b>1.15</b>	
<b>Reverse Leakage Current</b> (Rated $V_R$ , 300 $\mu\text{s}$ pulse min.)	$T_A = 25^\circ\text{C}$ $I_{R1}$	--	<b>10</b>	$\mu\text{A}$
	$T_C = 100^\circ\text{C}$ $I_{R2}$	--	<b>1.0</b>	<b>mA</b>
<b>Junction Capacitance</b> ( $V_R = 10V_{DC}$ , $T_A = 25^\circ\text{C}$ , $f = 1\text{MHz}$ )	$C_J$	--	<b>225</b>	<b>pF</b>
<b>Reverse Recovery Time</b> ( $T_A = 25^\circ\text{C}$ , $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{RR} = 0.25\text{A}$ )	$t_{RR}$	--	<b>35</b>	<b>nsec</b>

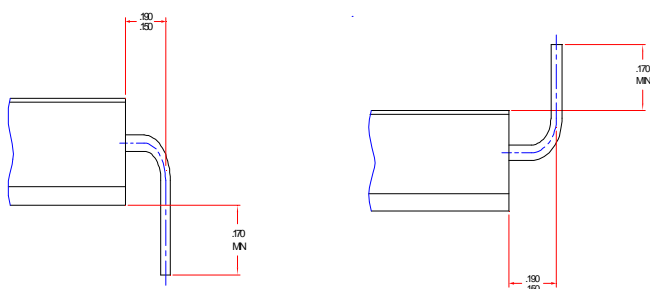
### CASE OUTLINE: TO-254 (Suffix M)



### CASE OUTLINE: TO-254Z (Suffix Z)



### OPTIONAL LEAD BEND CONFIGURATION



SUFFIX MD & ZD

SUFFIX MU & ZU

### PIN ASSIGNMENT

CODE	FUNCTION	PIN 1	PIN 2	PIN 3
CT	Common Cathode	Anode	Cathode	Anode
CA	Common Anode	Cathode	Anode	Cathode
D	Doubler	Cathode	A/C	Anode