



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

SDR623CTM&Z thru SDR626CTM&Z

40 AMP, 300 - 600 VOLTS 35 nsec HYPER FAST CENTERTAP RECTIFIER

Designer's Data Sheet	
Part Number/Ordering Information ^{1/}	
SDR62	
Screening ^{2/}	___ = Not Screened TX = TX Level TXV = TXV Level S = S Level
Lead Options	___ = Straight Leads DB = Down Bent UB = Up Bent
Package	M = TO-254 Z = TO-254Z
Configuration	CT = Common Cathode CA = Common Anode D = Doubler DR = Doubler Reverse
Family/Voltage	3 = 300V 4 = 400V 5 = 500V 6 = 600V

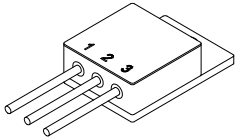
- FEATURES:**
- Meets and exceeds 1N6767 and 1N6766 performance
 - Hyper Fast Recovery: 35 ns Maximum
 - High Surge Rating
 - Low Reverse Leakage Current
 - Low Junction Capacitance
 - Hermetically Sealed Package
 - Gold Eutectic Die Attach Available
 - Ultrasonic Aluminum Wire Bonds
 - Ceramic Seal for Improved Reliability Available
 - TX, TXV, or Space Level Screening Available ^{2/}

Maximum Ratings	Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SDR623 SDR624 SDR625 SDR626	V_{RRM} V_{RWM} V_R	300 400 500 600 Volts
Average Rectified Forward Current ^{3/} (Resistive Load, 60 Hz Sine Wave, T _C = 100°C)		I _O	40 Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T _A = 25°C, per leg)		I _{FSM}	200 Amps
Operating & Storage Temperature		T _{OP} & T _{STG}	-65 to +200 °C
Maximum Total Thermal Resistance Junction to Case, each individual diode Junction to Case ^{3/}		R _{θJC}	2.0 1.2 °C/W

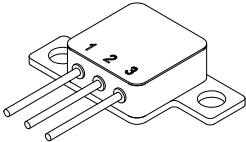
NOTES:

- ^{1/} For ordering Information, Price, and Availability, Contact Factory.
- ^{2/} Screening per MIL-PRF-19500.
- ^{3/} Both Legs Tied Together.

TO-254



TO-254Z



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

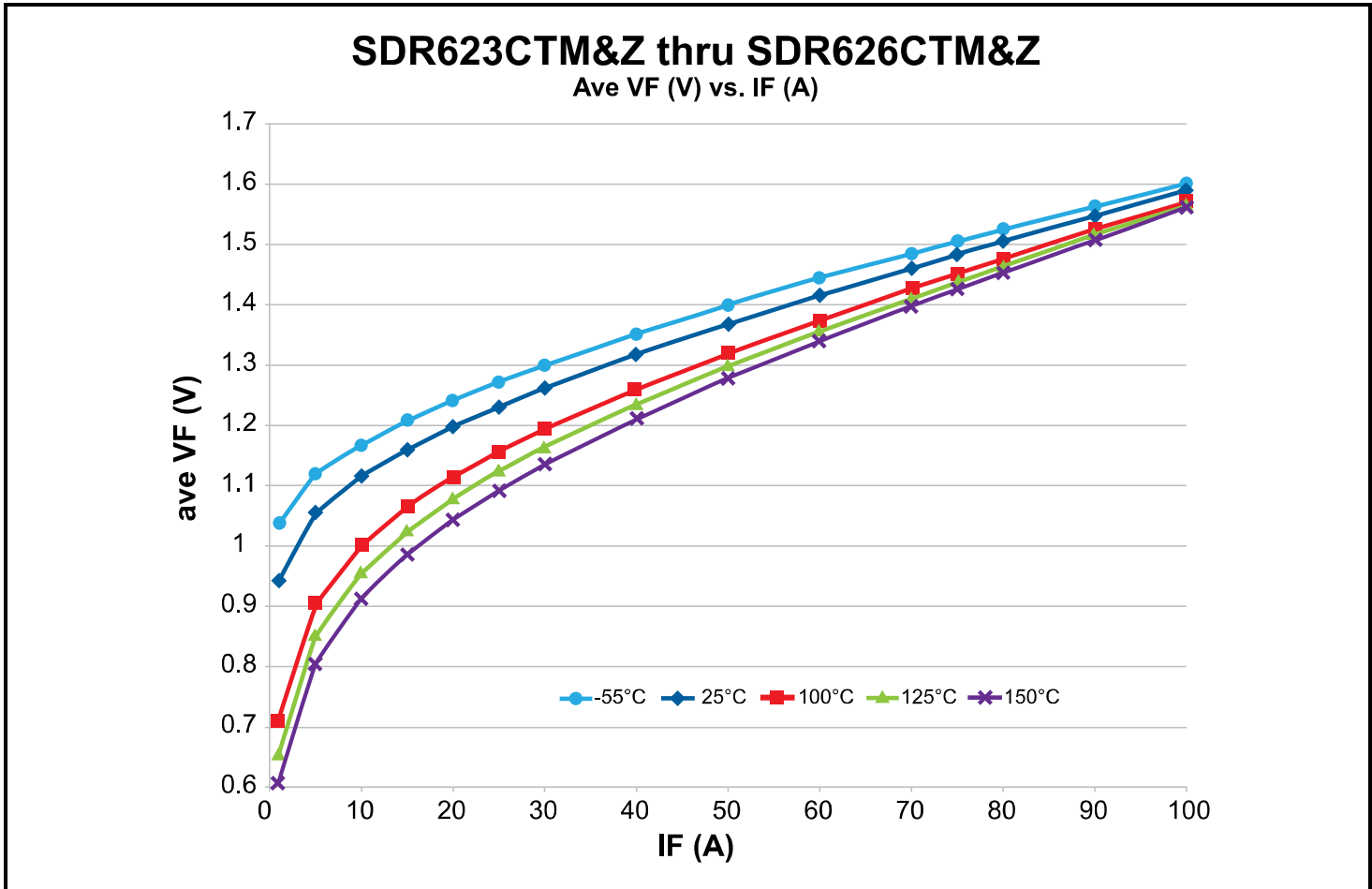


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Electrical Characteristic (Per Leg)		Symbol	Max	Units
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 – 500 μsec Pulse)	$I_F = 10\text{ A}$	V_{F1}	1.35	V_{DC}
	$I_F = 20\text{ A}$	V_{F2}	1.55	
Instantaneous Forward Voltage Drop ($I_F = 10\text{ A}$, 300 – 500 μsec Pulse)	$T_A = 100^\circ\text{C}$	V_{F3}	1.25	V_{DC}
	$T_A = -55^\circ\text{C}$	V_{F4}	1.45	
Reverse Leakage Current (100% of rated V_R , 300 μs pulse min.)	$T_A = 25^\circ\text{C}$	I_{R1}	10	μA
	$T_A = 100^\circ\text{C}$	I_{R2}	1000	
Reverse Recovery Time ($I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{RR} = 0.25\text{ A}$, $T_A = 25^\circ\text{C}$)		t_{RR}	35	nsec
Junction Capacitance ($V_R = 10\text{ V}_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{ MHz}$)		C_J	150	pF

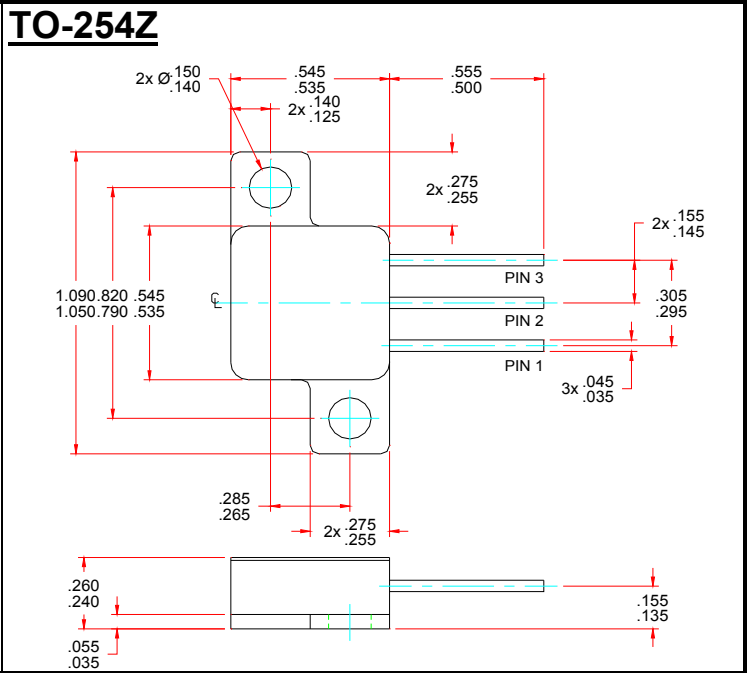
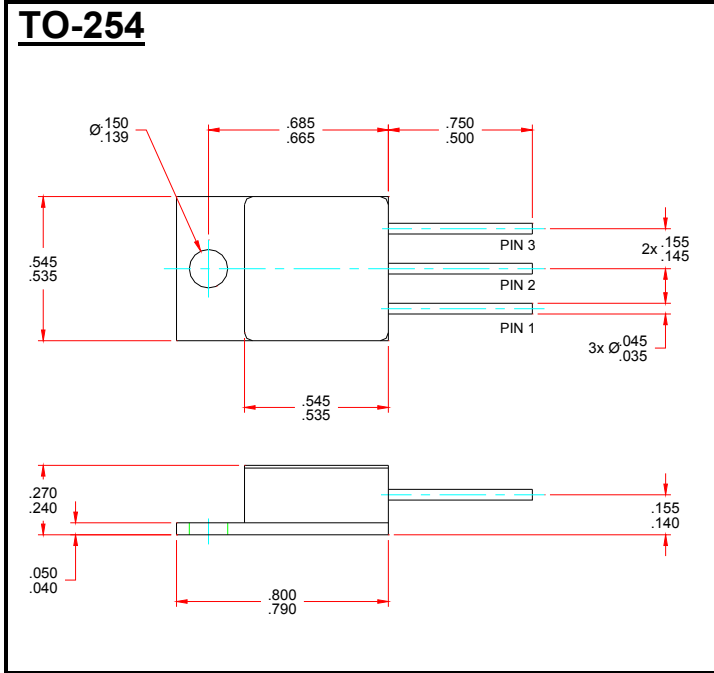




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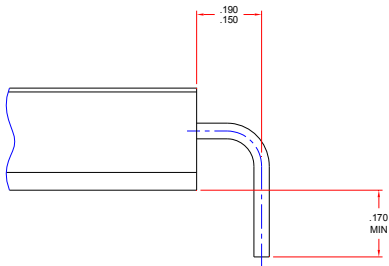
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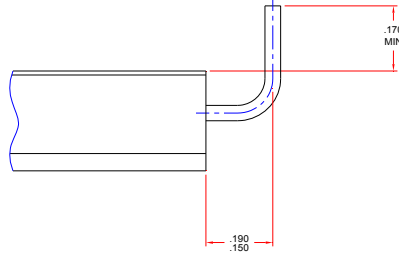


Optional Lead Bent Configuration

Down Bent (DB Suffix)



Up Bent (UB Suffix)



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	AC	Anode
DR	Doubler, Reverse	Anode	AC	Cathode

For information on curves, contact the Factory Representative for Engineering Assistance.

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DATA SHEET #: RH0049F

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