



SOLID STATE DEVICES, INC.

14830 Valley View Blvd * La Mirada, Ca 90638

Phone: (562) 404-7855 * Fax: (562) 404-1773

Designer's Data Sheet

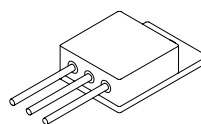
FEATURES:

- Ultra Fast Recovery: 60 nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Gold Eutectic Die Attach Available
- Ultrasonic Aluminum Wire Bonds
- Also Available in following configurations:
 - Common Anode: SDR646CAM & CAZ
 - SDR647CAM & CAZ
- TX, TXV and Space Level Screening Available

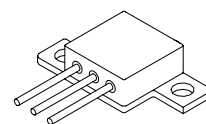
SDR646CTM & Z thru SDR647CTM & Z

40AMPS
600 - 700 VOLTS
60 nsec
ULTRA FAST
CENTERTAP RECTIFIER

TO-254 (M)



TO-254Z (Z)



Maximum Ratings	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and DC Blocking Voltage SDR646CTM & Z SDR647CTM & Z	V_{RRM} V_{RWM} V_R	600 700	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, $T_A = 25^\circ\text{C}$) <u>1</u> /	I_{FSM}	400	Amps
Operating and Storage Temperature	T_{OP} & T_{stg}	-65 TO +200	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case, <u>1</u> / Junction to Case, <u>2</u> /	$R_{\theta JC}$	2.0 3.5	$^\circ\text{C/W}$

NOTE:

1/ Both Legs Tied Together

2/ Per Leg.

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

DATA SHEET #: RU0089C

SDR646CTM & Z thru SDR647CTM & Z

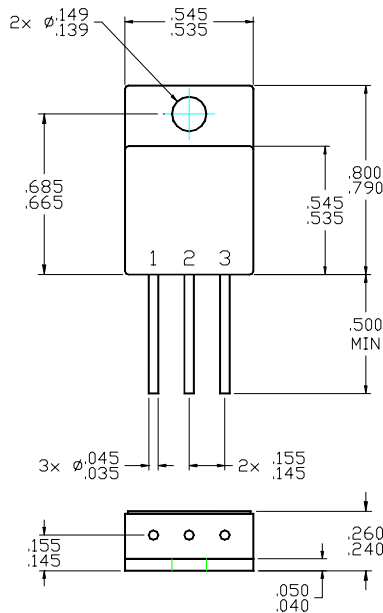


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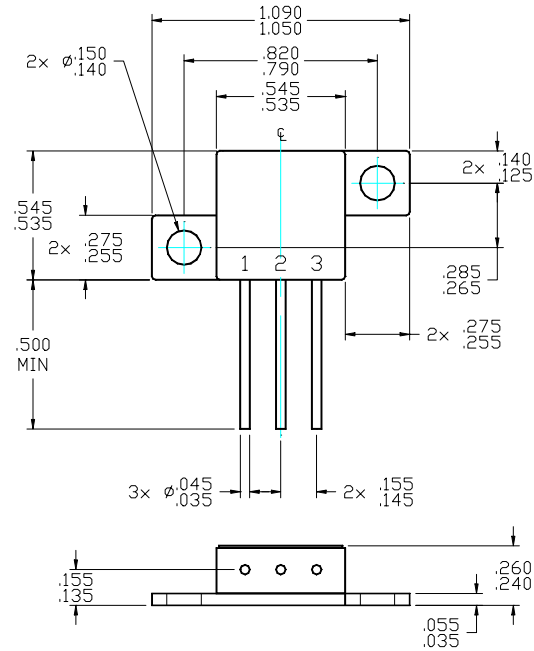
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Electrical Characteristics (Per Leg)	SYMBOL	MINIMUM	MAXIMUM	UNITS
Instantaneous Forward Voltage Drop $I_F = 10A$ ($T_A = 25^\circ C$, 300 μ sec Pulse)	V_{F1}	--	1.28	V_{DC}
	V_{F2}	--	1.50	
Instantaneous Forward Voltage Drop $T_A = 100^\circ C$ ($I_F = 10A$, 300 μ sec pulse)	V_{F3}	--	1.17	V_{DC}
	V_{F4}	--	1.35	
Reverse Leakage Current $T_A = 25^\circ C$ (Rated V_R , 300 μ s pulse min.)	I_{R1}	--	50	μA
	I_{R2}	--	5.0	mA
Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ C$, $f = 1MHz$)	C_J	--	70	pF
Reverse Recovery Time ($I_F = 500mA$, $I_R = 1.0A$, $I_{RR} = 250 mA$, $T_A = 25^\circ C$)	t_{RR}	--	60	nsec

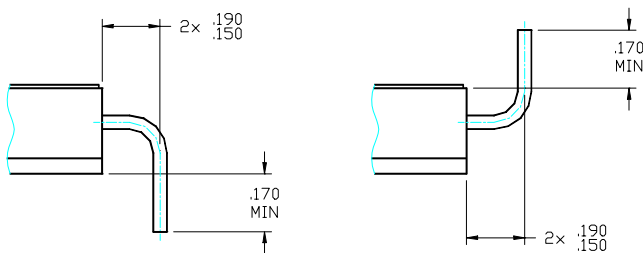
CASE OUTLINE: TO-254 (Sufix M)



CASE OUTLINE: TO-254Z (Sufix Z)



OPTIONAL LEAD BEND CONFIGURATION



SUFIX MDB & ZDB

SUFIX MUB & ZUB

PIN ASSIGNMENT

CODE	FUNCTION	PIN 1	PIN 2	PIN 3
CT	Common Cathode	Anode	Cathode	Anode
CA	Common Anode	Cathode	Anode	Cathode