



Solid State Devices, Inc.

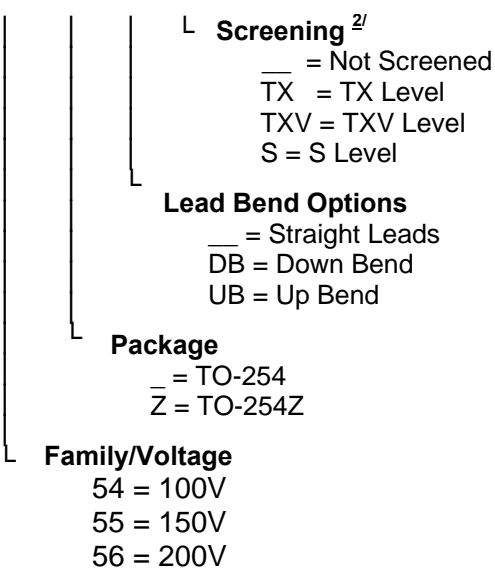
14701 Firestone Blvd * La Mirada, CA 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

1N6654 thru 1N6656

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

1N66 _ _ _



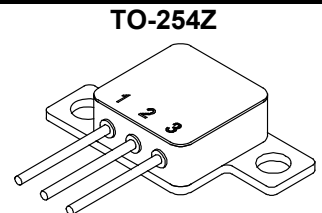
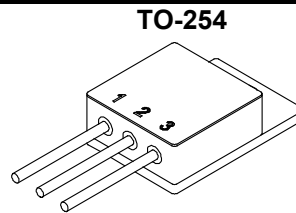
**20 AMP
 HYPER FAST COMMON CATHODE
 CENTERTAP RECTIFIER
 100 - 200 VOLTS
 35 nsec**

- FEATURES:**
- Replaces 1N5816 devices
 - Hyperfast recovery: 35 nsec maximum
 - High surge rating
 - Low reverse leakage current
 - Low junction capacitance
 - Gold eutectic die attach available
 - Ultrasonic aluminum wire bonds
 - Ceramic seals for superior hermeticity available
 - Available in TO-254Z (specify Z suffix)
 - TX, TXV, or S level screening available

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage^{3/}	1N6654	V_{RRM}	100	V
	1N6655	V_{RWM}	150	
	1N6656	V_R	200	
Average Rectified Forward Current (Resistive load, 60 Hz sine wave, $T_A = 25^\circ\text{C}$)		I_O	40	A
Peak Surge Current (8.3 ms pulse, half sine wave, $T_A = 25^\circ\text{C}$, per leg)		I_{FSM}	300	A
Operating & Storage Temperature		$T_{OP} \ \& \ T_{STG}$	-65 to +200	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	2.1	$^\circ\text{C/W}$

NOTES:

- 1/ For ordering information, price, and availability, contact factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ Higher voltages available.
- 4/ Connect pins 2 & 3 together.



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

DATA SHEET #: RH0061B

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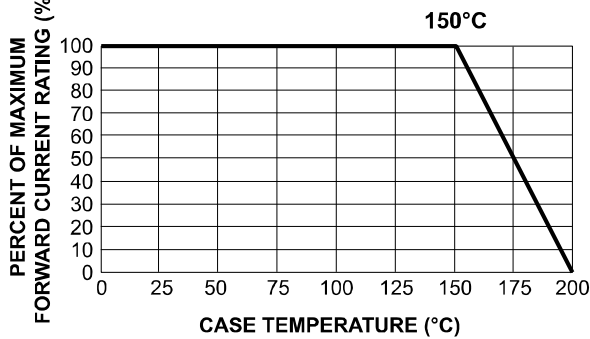
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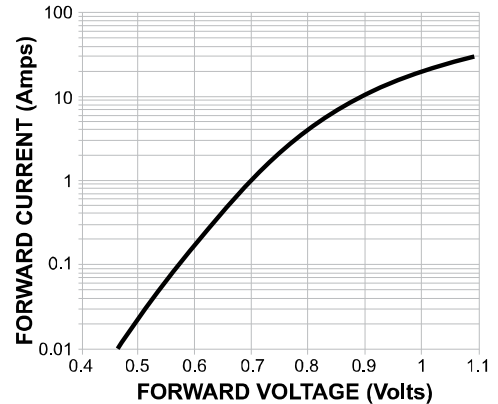
Electrical Characteristic (Per Leg)		Symbol	Max	Units
Instantaneous Forward Voltage Drop^{4/} (T _A = 25°C, 300 μsec pulse)	I _F = 10 A	V _{F1}	1.0	V
	I _F = 20 A	V _{F2}	1.2	
Instantaneous Forward Voltage Drop^{4/} (I _F = 10 A, 300 μsec pulse)	T _A = 100°C	V _{F3}	0.83	V
	T _A = -65°C	V _{F4}	1.15	
Reverse Leakage Current (Rated V _R , 300 μs pulse min.)	T _A = 25°C	I _{R1}	10	μA
	T _A = 100°C	I _{R2}	1	mA
Reverse Recovery Time (I _F = 1 A, I _R = 1 A, I _{RR} = 100 mA, T _A = 25°C)		t _{RR}	35	nsec
Junction Capacitance (T _A = 25°C, f = 1 MHz)	V _R = 10 V	C _J	150	pF

TYPICAL OPERATING CURVES

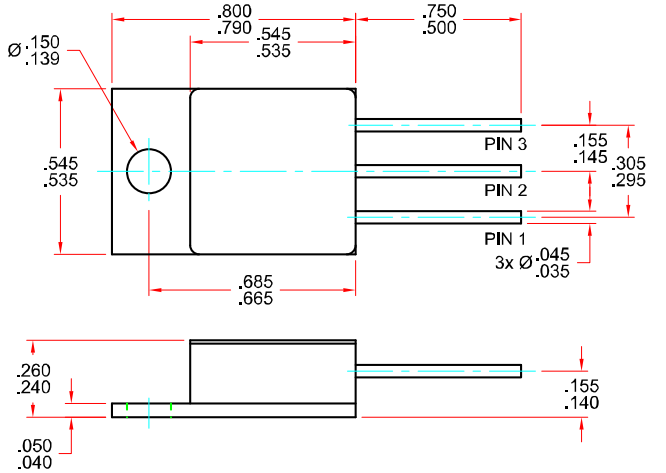
T_A = 25°C unless otherwise specified



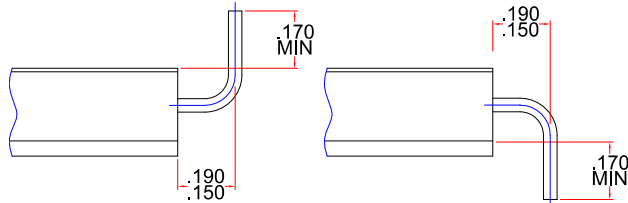
FORWARD VOLTAGE vs. FORWARD CURRENT



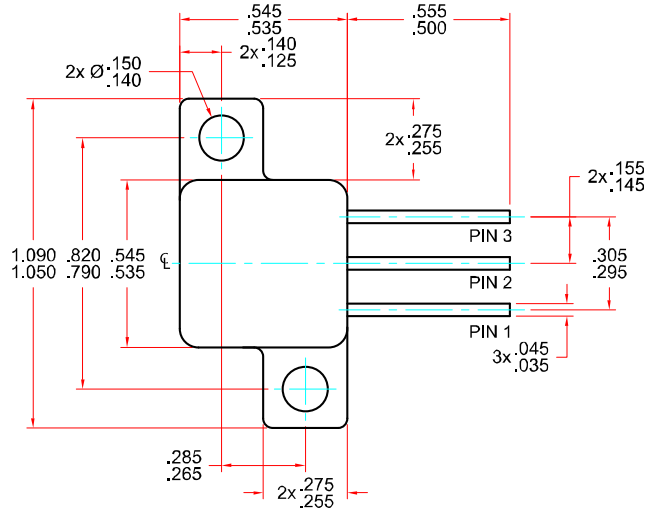
CASE OUTLINE: TO-254



PIN 1: ANODE 1 PIN 2: CATHODE PIN 3: ANODE 2



CASE OUTLINE: TO-254Z



PIN 1: ANODE 1 PIN 2: CATHODE PIN 3: ANODE 2

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