

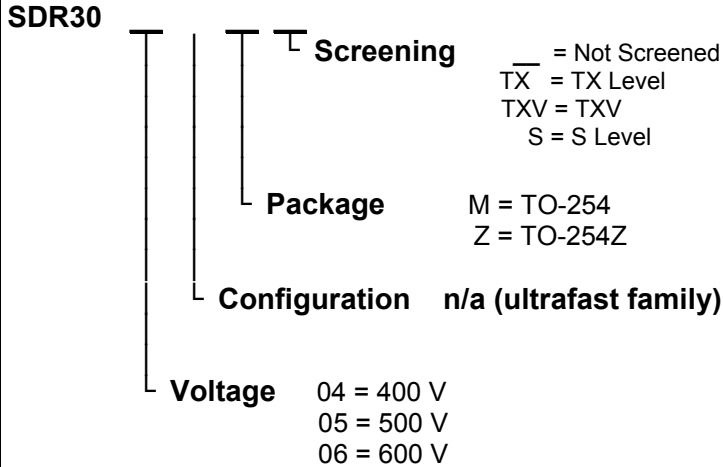


Solid State Devices, Inc.

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 ssdi@ssdi-power.com * www.ssdi-power.com

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}



SDR3006 series

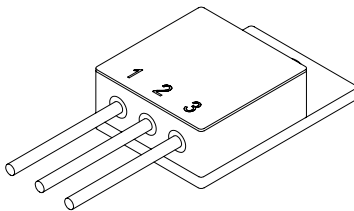
**30A 80nsec
 400 to 600 V
 Ultrafast Rectifier**

Features:

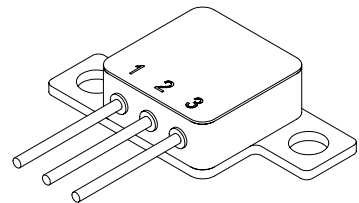
- Ultrafast Recovery: 100nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed, Isolated Package providing enhanced thermal performance
- Eutectic Die Attach
- TX, TXV, and S Level Screening iaw MIL-PRF-19500 Available
- hyperfast version available as SDR3006HF

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse Voltage	SDR3004	V _{RRM}	400	Volts
	SDR3005		500	
	SDR3006		600	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T _C = 100 °C)	Total	I _O	30	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T _A = 25 °C)		I _{FSM}	500	Amps
Operating & Storage Temperature		T _{OP} & T _{STG}	-65 to +200	°C
Maximum Total Thermal Resistance Junction to Case		R _{θJC}	1.2 (0.9 typ)	°C/W

TO-254 (M)



TO-254Z (Z)



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

DATA SHEET #: RC0090A

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SDR3006 Series

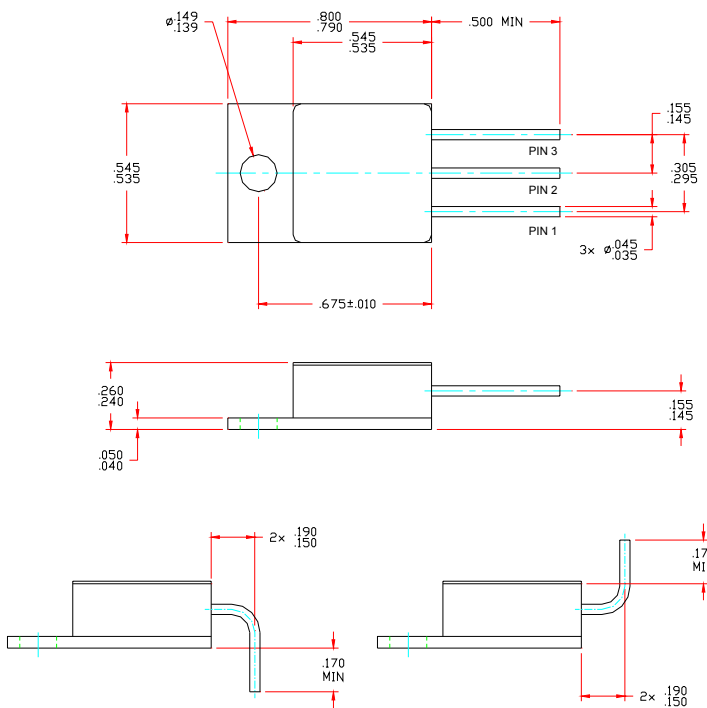
Electrical Characteristic		Symbol	Min	Max	Units
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 – 500 μsec Pulse)	$I_F = 15\text{A}$	V_{F1}	—	1.20	V_{DC}
	$I_F = 30\text{A}$	V_{F2}	—	1.40	
Instantaneous Forward Voltage Drop ($I_F = 15\text{A}$, 300 – 500 μsec Pulse)	$T_A = -55^\circ\text{C}$	V_{F3}	—	1.30	V_{DC}
	$T_A = 100^\circ\text{C}$	V_{F4}	—	1.10	
Reverse Leakage Current (100% of rated V_R , 300 μs pulse min.)	$T_A = 25^\circ\text{C}$	I_{R1}	—	25	μA
	$T_A = 100^\circ\text{C}$	I_{R2}	—	2000	
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}	—	80 (typ 65)	nsec
Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{MHz}$)		C_J	—	120 (typ 85)	pF

NOTES:

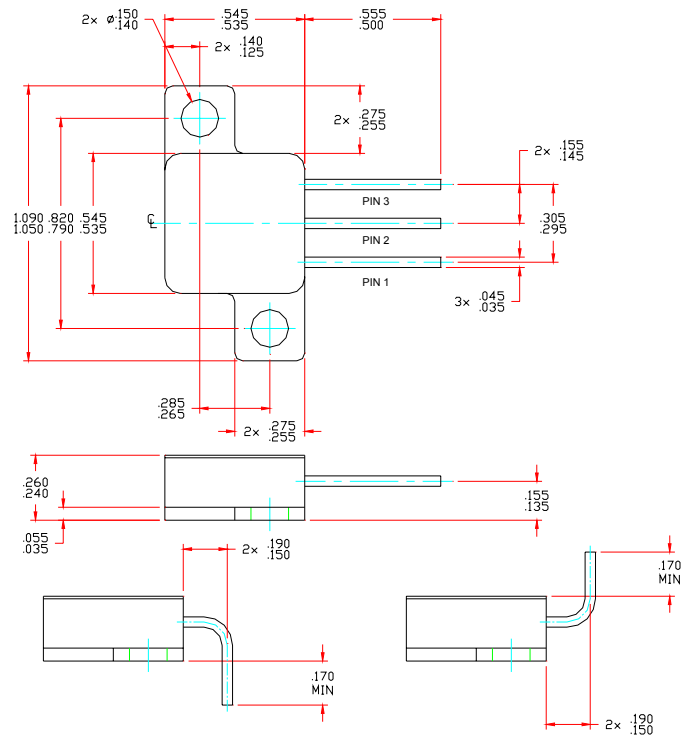
1/ For Ordering Information, Price, and Availability Contact Factory.

Available Part Numbers: SDR3004M, SDR3004Z SDR3005M, SDR3005Z SDR3006M, SDR3006Z	PIN ASSIGNMENT			
	PACKAGE	Pin 1	Pin 2	Pin 3
	TO-254 (M)	Cathode	Anode	Anode
	TO-254Z (Z)	Cathode	Anode	Anode

TO-254:



TO-254Z:



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