



Solid State Devices, Inc.

14830 Valley View Blvd * La Mirada, Ca 90638

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

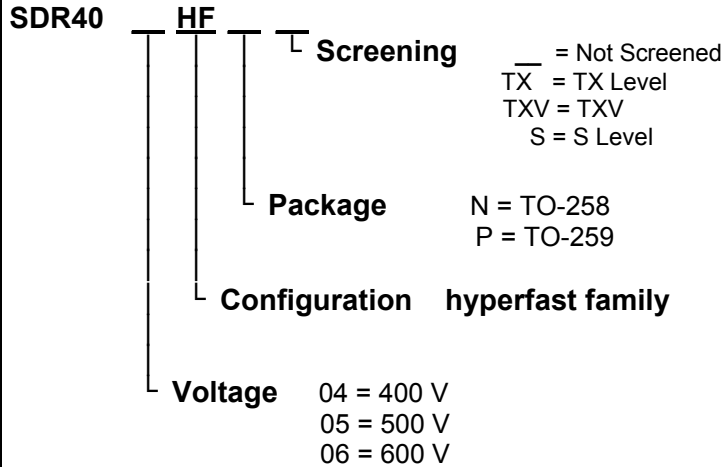
ssdi@ssdi-power.com * www.ssdi-power.com

SDR4006HF series

40A 35nsec
400 to 600 V
Hyper Fast Rectifier

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

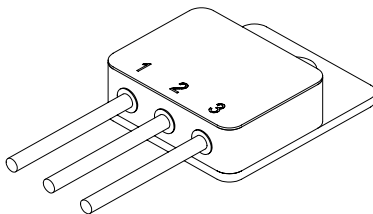


Features:

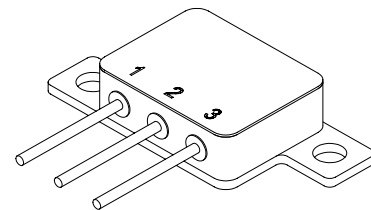
- Hyper Fast Recovery: 35nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed, Isolated Package Providing Enhanced Thermal Performance
- Eutectic Die Attach
- TX, TXV, and Space Level Screening iaw MIL-PRF-19500 Available

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse Voltage	SDR4004HF SDR4005HF SDR4006HF	V_{RRM}	400 500 600	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, $T_C = 100\text{ }^\circ\text{C}$)	Total	I_o	40	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25\text{ }^\circ\text{C}$)		I_{FSM}	600	Amps
Operating & Storage Temperature		T_{OP} & T_{STG}	-65 to +200	$^\circ\text{C}$
Maximum Total Thermal Resistance Junction to Case		$R_{\theta JC}$	1.2 (0.8 typ)	$^\circ\text{C/W}$

TO-258 (N)



TO-259 (P)



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

DATA SHEET #: RC0092A

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SDR4006HF Series

Electrical Characteristic		Symbol	Min	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}	—	1.50	
	$I_F = 40\text{ A}$	V_{F3}		1.75	
Instantaneous Forward Voltage Drop ($I_F = 20\text{ A}$, 300 – 500 μsec Pulse)	$T_A = -55^\circ\text{C}$	V_{F3}	—	1.65	V_{DC}
	$T_A = 100^\circ\text{C}$	V_{F4}		1.32	
Reverse Leakage Current (100% of Rated V_R , 300 μs pulse min.)	$T_A = 25^\circ\text{C}$	I_{R1}	—	50	μA
	$T_A = 100^\circ\text{C}$	I_{R2}	—	5,000	μA
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 ($V_R = 10V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1\text{ MHz}$)		C_J	—	80	pF

NOTES:

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

Available Part Numbers:

SDR4004HFN, SDR4004HFP

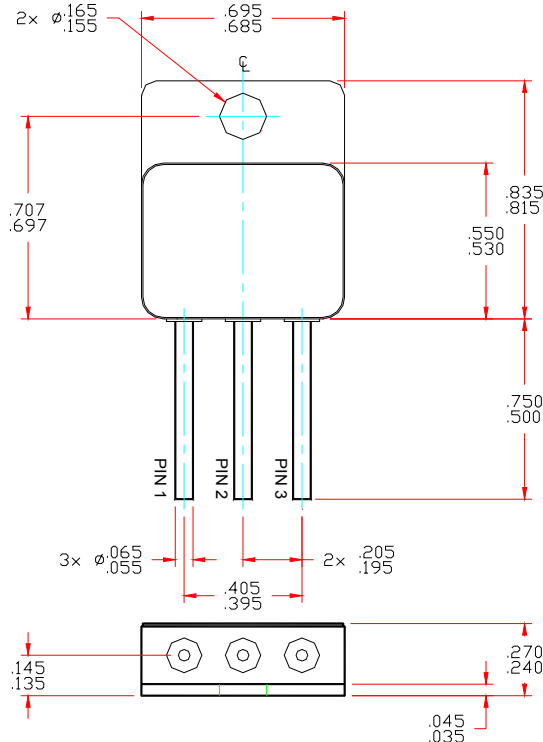
SDR4005HFN, SDR4005HFP

SDR4006HFN, SDR4006HFP

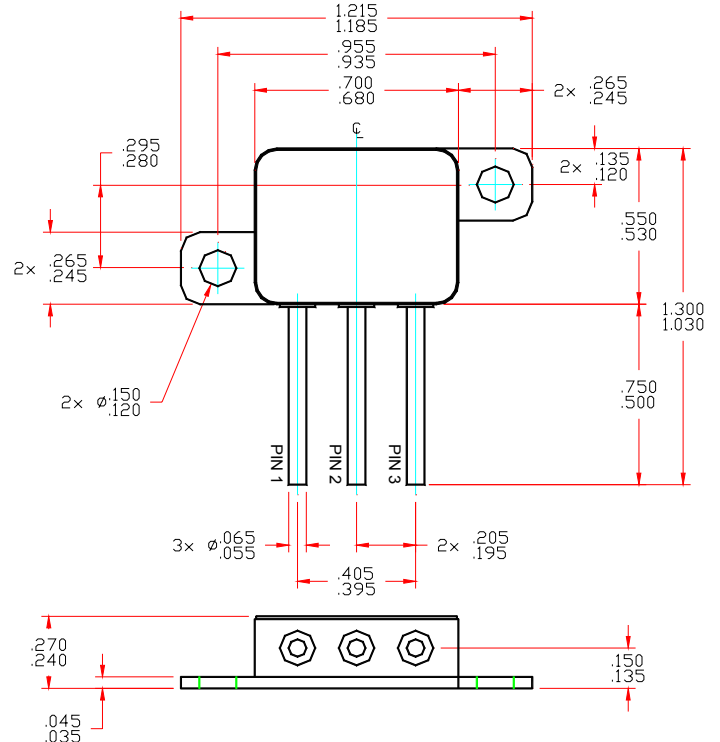
PIN ASSIGNMENT

PACKAGE	Pin 1	Pin 2	Pin 3
TO-258 (N)	Cathode	Anode	Anode
TO-259 (P)	Cathode	Anode	Anode

TO-258:



TO-259:



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