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

SDR0360 series

3 AMP, 30nsec
SMD HyperFast Rectifier
Low Forward Voltage

400 - 600 VOLTS

Designer's Data Sheet

Part Number / Ordering Information [1/]

SDR 03 ___ ___

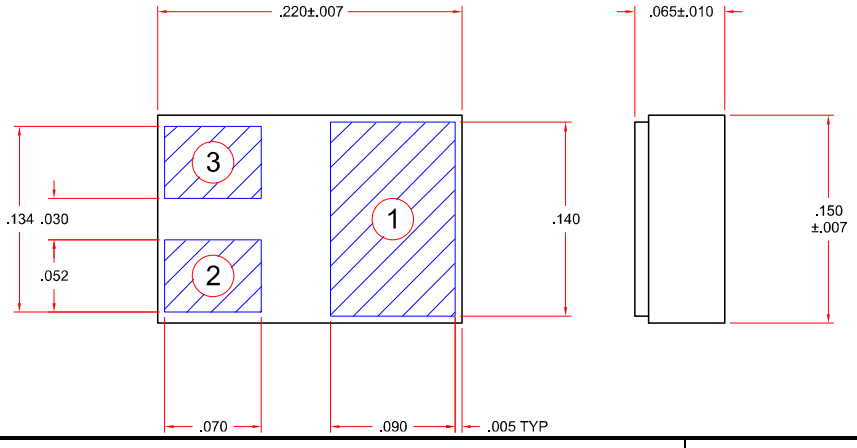
- Screening [2/]
  - ___ = Not Screened
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level
- Package
  - S.22 = SMD.22
- Voltage
  - 40 = 400V
  - 50 = 500V
  - 60 = 600V
- Current
  - 03 = 3A

FEATURES:

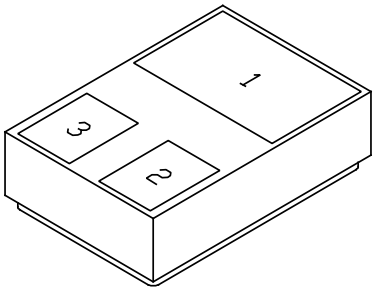
- **Hyper Fast Recovery: 30 nsec typical**
- **Very Low Reverse Leakage Current**
- **Low Forward Voltage**
- **Low Junction Capacitance**
- **Hermetically Sealed Package**
- **Ultrasonic Aluminum Wire Bonds**
- **TX, TXV, and Space Level Screening Available Consult Factory.** [2/]

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	**SDR0340** **SDR0350** **SDR0360**	V_{RRM} V_{RWM} V_R	400 500 600	**Volts**
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A = 100°C)		I_O	3	**Amps**
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, Superimposed on I_O, Allow Junction to Reach Equilibrium between Pulses, T_A = 25°C)		I_{FSM}	60	**Amps**
Operating and Storage Temperature		T_{OP} & T_{stg}	-55 to +150	**°C**
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	15	**°C/W**

Notes:
1/ For ordering information, price, operating curves and availability - contact factory.
2/ Screening based on MIL-PRF-19500. Screening flows available on request.



SMD.22



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

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ELECTRICAL CHARACTERISTICS		Symbol	Typ	Max	Unit
Instantaneous Forward Voltage Drop (T_A = 25°C, 300 μsec Pulse)	I_F = 1 A_{DC} I_F = 3 A_{DC}	V_{F1} V_{F2}	1.04 1.24	1.2 1.5	V_{DC}
Instantaneous Forward Voltage Drop (T_A = -55°C, 300 μsec Pulse)	I_F = 1 A_{DC} I_F = 3 A_{DC}	V_{F3} V_{F4}	1.13 1.32	1.35 1.60	V_{DC}
Instantaneous Forward Voltage Drop (T_A = +100°C, 300 μsec Pulse)	I_F = 1 A_{DC} I_F = 3 A_{DC}	V_{F5} V_{F6}	0.91 1.13	- -	V_{DC}
Instantaneous Forward Voltage Drop (T_A = +125°C, 300 μsec Pulse)	I_F = 1 A_{DC} I_F = 3 A_{DC}	V_{F7} V_{F8}	0.87 1.10	1.10 1.40	V_{DC}
Instantaneous Forward Voltage Drop (T_A = +150°C, 300 μsec Pulse)	I_F = 1 A_{DC} I_F = 3 A_{DC}	V_{F9} V_{F10}	0.83 1.07	- -	V_{DC}
Reverse Leakage Current (Rated V_R, 300 μsec pulse minimum)	T_A = 25°C T_A = +100°C T_A = 125°C T_A = +150°C	I_{R1} I_{R2} I_{R3} I_{R4}	0.05 2 5 15	10 - 50 -	uA
Junction Capacitance T_A = 25°C, f = 1 MHz	V_R =5V_{DC} V_R =10V_{DC}	C_{J1} C_{J2}	10 8	- 20	pF
Reverse Recovery Time I_F =1A_{DC}, I_R =1A_{DC}, I_{rr} =0.1A_{DC}		t_{rr1}	65	-	ns
Reverse Recovery Time I_F =0.5A_{DC}, I_R =1A_{DC}, I_{rr} =0.25A_{DC}		t_{rr2}	30	50	ns