



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

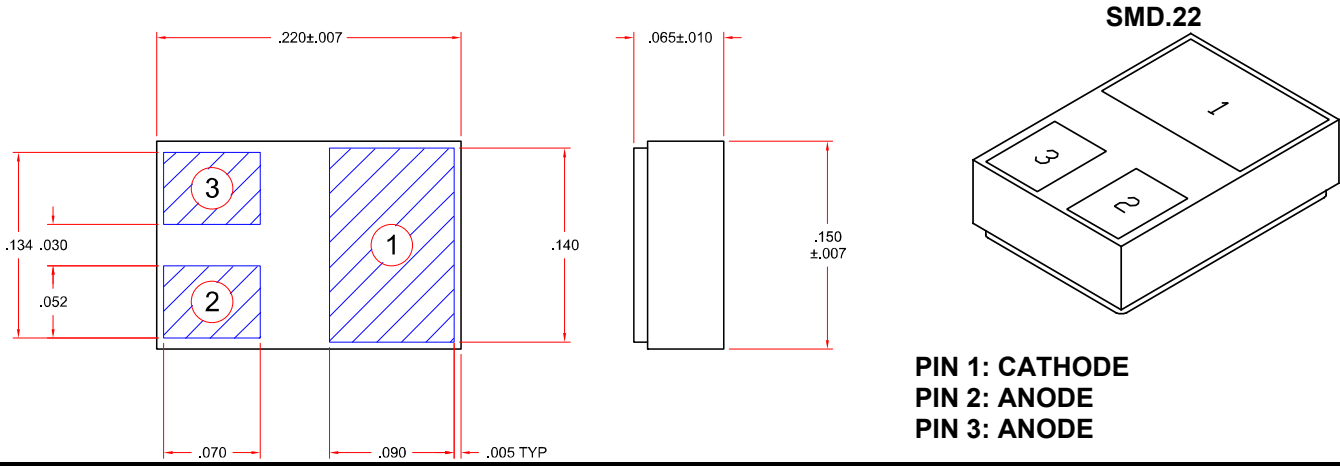
Voltage
 40 = 400V
 50 = 500V
 60 = 600V

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	V_{RRM}	400	Volts
	SDR0350	V_{RWM}	500	
	SDR0360	V_R	600	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 100^\circ\text{C}$)		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, $T_A = 25^\circ\text{C}$)		I_{FSM}	60	Amps
Operating and Storage Temperature		T_{OP} & T_{stg}	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	15	$^\circ\text{C/W}$

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



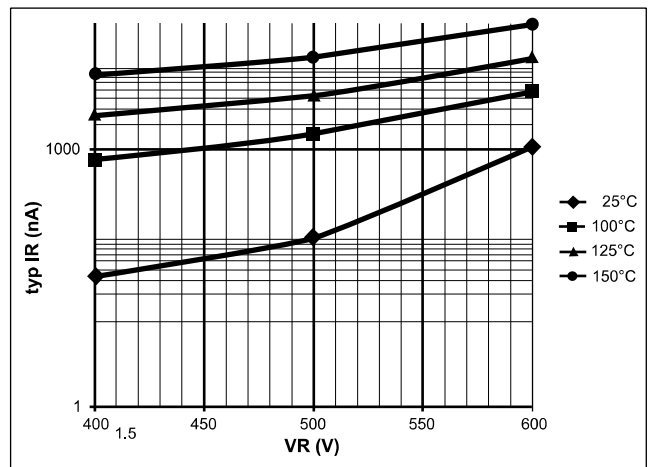
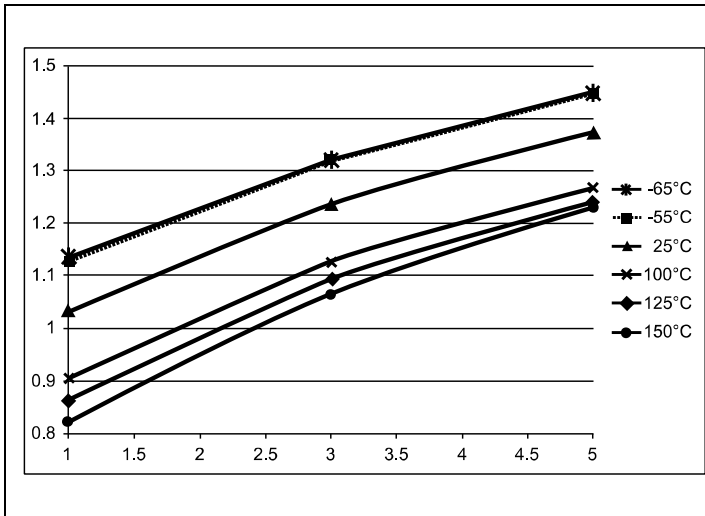


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ELECTRICAL CHARACTERISTICS		Symbol	Typ	Max	Unit
Instantaneous Forward Voltage Drop ($T_A = 25^\circ\text{C}$, 300 μsec Pulse)	$I_F = 1 A_{DC}$	V_{F1}	1.04	1.2	V_{DC}
	$I_F = 3 A_{DC}$	V_{F2}	1.24	1.5	
Instantaneous Forward Voltage Drop ($T_A = -55^\circ\text{C}$,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



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

DATA SHEET #: RC0161A

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