Solid State Devices, Inc.
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SDR2GSM & SMS
Thru
SDR2MSM & SMS

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDR2 ___ ___ ___

- **Screening** [2/]
  - __ = Not Screened
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level (for SM, use –S)
- **Package Type**
  - SM = Surface Mount Round Tab
  - SMS = Surface Mount Square Tab
- **Voltage**
  - G = 400 V
  - J = 600 V
  - K = 800 V
  - M = 1000 V

1 AMP
ULTRAFAST RECTIFIER
400 – 1000 VOLTS
50 – 70 nsec

FEATURES:

- Ultrafast Recovery: 50-70 ns Max @ 25°C [4/]
  80-120 ns Max @ 100°C [4/]
- PIV to 1000 Volts
- Hermetically Sealed
- Low Reverse Leakage Current
- Single Chip Construction
- For High Efficiency Applications
- Available in Round and Square Tab Versions
- Available in Axial Lead Versions
- TX, TXV, and S-Level Screening Available [2/]

MAXIMUM RATINGS [3/]

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDR2G SDR2J SDR2K SDR2M	V_{RRM} V_{RWM} V_R	400 600 800 1000	**V**
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, T_A = 25°C)		I_O	1	**A**
Peak Surge Current (8.3 msec Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, T_A = 25°C)		I_{FSM}	25	**A**
Operating & Storage Temperature		T_{OP} and T_{STG}	-65 to +175	**°C**
Thermal Resistance, Junction to End Tab		$R_{\theta JE}$	28	**°C/W**

NOTES:

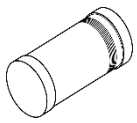
1/ For ordering information, price, operating curves, and availability - Contact factory.

2/ Screening based on MIL-PRF-19500. Screening flows available on request.

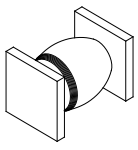
3/ Unless otherwise specified, all electrical characteristics @ 25°C.

4/ Recovery conditions: I_F = 0.5 Amp, I_R = 1.0 Amp, I_{RR} to .25 Amp.

Surface Mount Round Tab (SM)



Surface Mount Square Tab (SMS)



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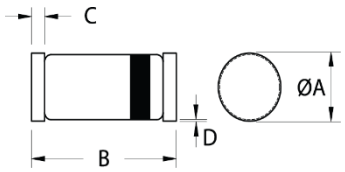
ELECTRICAL CHARACTERISTICS[3/]

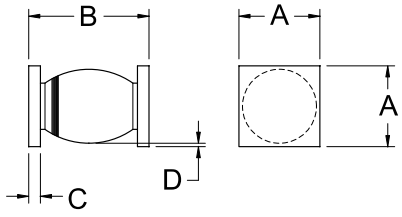
CHARACTERISTICS		SYMBOL	MAXIMUM	UNIT
Instantaneous Forward Voltage Drop (I_F = 1 Adc, 300 µs Pulse, T_A = 25°C)	SDR2GSM – SDR2MSM	V_{F1}	2.8	**Vdc**
	SDR2GSMS – SDR2JSMS		1.9	
	SDR2KSMS – SDR2MSMS		2.1	
Instantaneous Forward Voltage Drop (I_F = 1 Adc, 300 µs Pulse, T_A = -55°C)	SDR2GSM – SDR2MSM	V_{F2}	2.95	**Vdc**
	SDR2GSMS – SDR2JSMS		2.05	
	SDR2KSMS – SDR2MSMS		2.25	
Reverse Leakage Current (Rated V_R, 300 µs Pulse Minimum, T_A = 25°C)		I_{R1}	5	**µA**
Reverse Leakage Current (Rated V_R, 300 µs Pulse Minimum , T_A = 100°C)		I_{R2}	0.5	**mA**
Junction Capacitance (V_R = 10 Vdc, T_A = 25°C , f = 1 MHz)		C_J	20	**pf**
Reverse Recovery Time[4/]	SDR2G-JSM & SMS	t_{RR}	50	**ns**
	SDR2KSM & SMS		60	
	SDR2MSM & SMS		70	

Round Tab Surface Mount (SM):



DIMENSIONS		
DIM	MIN	MAX
A	.095”	.105”
B	.190”	.210”
C	.010”	.030”
D	---	---

Square Tab Surface Mount (SMS):



DIMENSIONS		
DIM	MIN	MAX
A	.127”	.140”
B	.200”	.280”
C	.022”	.028”
D	.002”	---

*Dimensions are prior to solder dipping

NOTES:

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3/ Unless otherwise specified, all electrical characteristics @ 25°C.

4/ Recovery conditions: I_F = 0.5 Amp, I_R = 1.0 Amp, I_{RR} to 0.25 Amp.