



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
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SDR10D thru SDR10M and SDR10DSMS thru SDR10MSMS Series

10 AMPS
200 – 1000 VOLTS
5 μ s STANDARD RECOVERY
RECTIFIER

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SDR10 _ _ _

Screening ^{2/}

_ = Not Screened
TX = TX Level
TXV = TXV
S = S Level

Package Type

_ = Axial Leaded
SMS = Surface Mount Square Tab

Voltage/Family

D = 200V K = 800 V
G = 400V M = 1000 V
J = 600V

FEATURES:

- Standard Recovery: 5 μ s maximum ^{4/}
- PIV to 1000 Volts
- Hermetically Sealed
- Low Reverse Leakage Current
- Single Chip Construction
- High Surge Rating
- Replaces Larger DO-4 Rectifiers
- Low Thermal Resistance
- Available in Axial & Square Tab Versions
- TX, TXV, and S-Level Screening Available ^{2/}
- Faster Recovery Devices Available - Contact Factory

MAXIMUM RATINGS ^{3/}

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage And DC Blocking Voltage	SDR10D & SDR10DSMS SDR10G & SDR10GSMS SDR10J & SDR10JSMS SDR10K & SDR10KSMS SDR10M & SDR10MSMS	V_{RRM} V_{RWM} V_R	200 400 600 800 1000 Volts
Average Rectified Forward Current (Resistive Load, 60Hz, Sine Wave, $T_A = 25^\circ C$)	I_O	10.0	Amps
Peak Surge Current (8.3 ms pulse, half sine wave, superimposed on I_O , allow junction to reach equilibrium between pulses, $T_A = 25^\circ C$)	I_{FSM}	150	Amps
Operating & Storage Temperature	T_J and T_{STG}	-65 to +175	$^\circ C$
Thermal Resistance	Junction to Lead for Axial, $L = .125"$ Junction to End Tab for Surface Mount	$R_{\theta JL}$ $R_{\theta JE}$	8 4 $^\circ C/W$

NOTES:

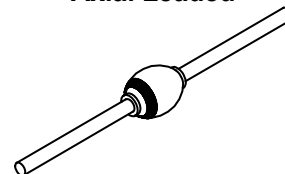
^{1/} For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

^{2/} Screening Based on MIL-PRF-19500. Screening Flows Available on Request.

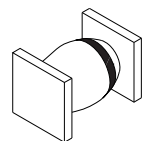
^{3/} Unless Otherwise Specified, All Electrical Characteristics @25 $^\circ C$.

^{4/} $I_F = 500mA$, $I_R = 1A$, $I_{RR} = 250mA$, $T_A = 25^\circ C$

Axial Leaded



SMS



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

DATA SHEET #: R0001C

DOC



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**SDR10D thru SDR10M
 and
 SDR10DSMS thru SDR10MSMS
 Series**

ELECTRICAL CHARACTERISTICS ^{3/}				
CHARACTERISTICS		SYMBOL	VALUE	UNIT
			MAX	
Instantaneous Forward Voltage Drop I _F = 10.0 Adc, 300-500µs pulse	T _A = +25°C	V _{F1}	1.25	Vdc
	T _A = -55°C	V _{F2}	1.40	
Reverse Leakage Current Rated V _R , 300µs pulse minimum	T _A = +25°C	I _{R1}	5	µA
	T _A = +100°C	I _{R2}	200	
Junction Capacitance V _R = 10 Vdc, f = 1MHz, T _A = 25°C		C _J	80	pF
Reverse Recovery Time I _F = 500mA, I _R = 1A, I _{RR} = 250mA, T _A = 25°C		t _{rr}	5	µs

Package Outlines:

DIMENSIONS (inches)			DIMENSIONS (inches)		
DIM.	Minimum	Maximum	DIM.	Minimum	Maximum
A	---	.170	A	.170	.180
B	.210	.250	B	.260	.300
C	.037	.043	C	.020	.030
D	1.000	---	D	.002	---

<p>AXIAL</p>	<p>SMS</p>
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