



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}	125	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:

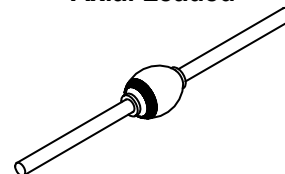
^{1/} For Ordering Information, Price, Operating Curves, and Availability- Contact Factory.

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

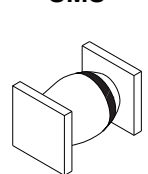
^{3/} Unless Otherwise Specified, All Electrical Characteristics @25 $^\circ C$.

^{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 #: R0001D

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 $I_F = 10.0 \text{ Adc}, 300\text{-}500\mu\text{s pulse}$	$T_A = +25^\circ\text{C}$ $T_A = -55^\circ\text{C}$	V_{F1} V_{F2}	1.25 1.40	Vdc
Reverse Leakage Current Rated V_R , 300 μs pulse minimum	$T_A = +25^\circ\text{C}$ $T_A = +100^\circ\text{C}$	I_{R1} I_{R2}	5 200	μA
Junction Capacitance $V_R = 10 \text{ Vdc}, f = 1\text{MHz}, T_A = 25^\circ\text{C}$		C_J	80	pF
Reverse Recovery Time $I_F = 500\text{mA}, I_R = 1\text{A}, I_{RR} = 250\text{mA}, T_A = 25^\circ\text{C}$		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	---

AXIAL

SMS