



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SPD205 thru SPD230 and SPD205SMS thru SPD230SMS

Designer's Data Sheet

Part Number/Ordering Information^{1/}

SPD

— — —

Screening^{2/}

- = Not Screened
- TX = TX Level
- TXV = TXV Level
- S = S Level

Package Type

- = Axial Leaded
- SMS = Surface Mount Square Tab

Voltage/Family

- 205 = 50 V
- 210 = 100 V
- 220 = 200 V
- 230 = 300 V

2.0 AMP
50 – 300 VOLTS
25 ns HYPERFAST RECOVERY
RECTIFIER

FEATURES:

- Hyperfast Reverse Recovery: 25 ns Maximum^{4/}
- PIV to 300 Volts
- Hermetically Sealed
- Low Forward Voltage Drop
- Void Free Chip Construction
- For High Efficiency Applications
- Available in Axial & Square Tab Versions
TX, TXV, and S-Level Screening Available^{2/}
- Replacement for: 1N5802, US thru 1N5806, US

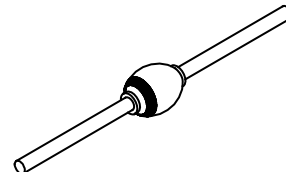
MAXIMUM RATINGS^{3/}

RATING		SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SPD205	V_{RRM}	50	V
	SPD210	V_{RWM}	100	
	SPD220	V_R	200	
	SPD230		300	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_A = 25^\circ\text{C}$)		I_O	2.0	A
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}	50	A
Operating & Storage Temperature		T_J and T_{STG}	-65 to +175	$^\circ\text{C}$
Thermal Resistance	Junction to Lead for Axial, L = .375"	$R_{\theta JL}$	38	$^\circ\text{C/W}$
	Junction to End Tab for Surface Mount	$R_{\theta JE}$	25	

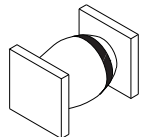
NOTES:

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

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 #: RH0099G

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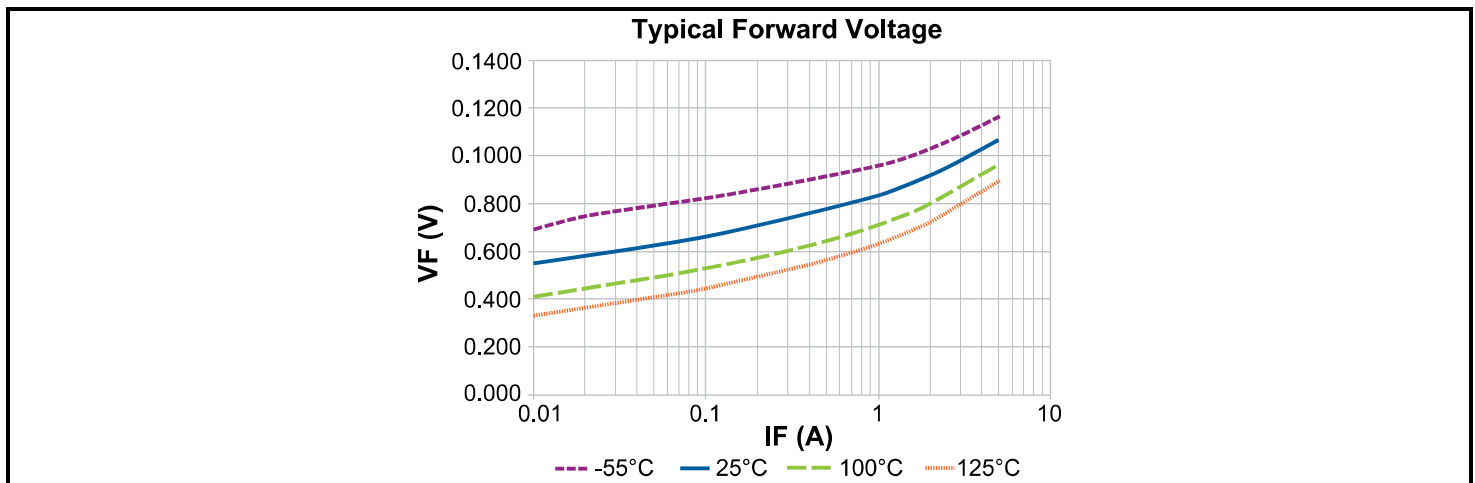
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SPD205 thru SPD230
and
SPD205SMS thru SPD230SMS

ELECTRICAL CHARACTERISTICS^{3/}

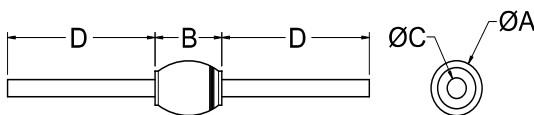
CHARACTERISTICS		SYMBOL	VALUE	UNIT
			MAX	
Instantaneous Forward Voltage Drop	$I_F = 2.0 \text{ Adc}$, $T_A = +25^\circ\text{C}$, 300 – 500 μs pulse $I_F = 2.0 \text{ Adc}$, $T_A = -55^\circ\text{C}$, 300 – 500 μs pulse	V_{F1} V_{F2}	1.0 1.2	Vdc
Reverse Leakage Current	Rated V_R , $T_A = +25^\circ\text{C}$ Rated V_R , $T_A = +100^\circ\text{C}$	I_{R1} I_{R2}	10 1	μA mA
Junction Capacitance	$V_R = 10 \text{ Vdc}$, $f = 1 \text{ MHz}$, $T_A = 25^\circ\text{C}$	C_J	45	pF
Maximum 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}	25	ns



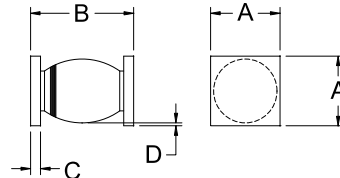
Package Outlines:

DIMENSIONS (inches)			DIMENSIONS (inches)		
DIM.	Minimum	Maximum	DIM.	Minimum	Maximum
A	---	.140	A	.134	.155
B	.190	.230	B	.230	.280
C	.027	.033	C	.022	.028
D	1.00	---	D	.002	---

AXIAL



SMS



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