



## 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

### Designer's Data Sheet

#### Part Number/Ordering Information <sup>1/</sup>

SPD5711

SPD5712

Screening <sup>2/</sup>      = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

Junction Capacitance      = 2.0 pF  
A = 1.2 pF

Family/Rating SPD5711 = 50V, 33mA  
SPD5712 = 16V, 75mA

SPD5711, SPD5711A

And

SPD5712, SPD5712A

33 - 75 mA

16 - 50 VOLTS

SCHOTTKY SMALL SIGNAL DIODE

#### Features:

- Extremely Low Turn On Voltage
- Ultra Fast Switching
- Hermetically Sealed
- Replacement for 1N5711 and 1N5712 with Improved Thermal Resistance
- Primary Intended for High Level UHF/VHF Detection and Pulse Applications with a Broad Dynamic Range
- TX, TXV, and S-Level Screening Available <sup>2/</sup>
- A Suffix = Selection for Low Cj- 1.2pF Max

#### Maximum Ratings <sup>3/</sup>

|                                                                                                   |                    | Symbol                          | Value       | Units              |
|---------------------------------------------------------------------------------------------------|--------------------|---------------------------------|-------------|--------------------|
| Peak Repetitive Reverse and DC Blocking Voltage                                                   | SPD5711<br>SPD5712 | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50<br>15    | Volts              |
| Average Rectified Forward Current<br>(Resistive Load, 60 Hz Sine Wave, $T_C = 25^\circ\text{C}$ ) | SPD5711<br>SPD5712 | $I_O$                           | 33<br>75    | mAmps              |
| Operating & Storage Temperature                                                                   |                    | $T_{OP} \& T_{STG}$             | -65 to +150 | $^\circ\text{C}$   |
| Maximum Thermal Resistance,<br>Junction to Lead, L = 3/8"                                         |                    | $R_{\theta JL}$                 | 250         | $^\circ\text{C/W}$ |

#### Notes:

1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

3/ Maximum Ratings and Electrical Characteristics @  $25^\circ\text{C}$  Unless Otherwise Specified.

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

DATA SHEET #: RS0008B

DOC



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, CA 90638  
Phone: (562) 404-7855 \* Fax: (562) 404-1773  
ssdi@ssdi-power.com \* www.ssdi-power.com

**SPD5711, SPD5711A  
And  
SPD5712, SPD5712A**

| Electrical Characteristics <sup>3/</sup>                                                                                             | Symbol                              | SPD5711 |      | SPD5712 |      | Units    |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------|------|---------|------|----------|
|                                                                                                                                      |                                     | Min     | Max  | Min     | Max  |          |
| <b>Blocking Reverse Voltage</b><br>( $I_R = 10 \mu A$ , $T_A = 25^\circ C$ , 300 – 500 $\mu s$ Pulse)                                | $V_{BR}$                            | 70      | —    | 20      | —    | $V_{DC}$ |
| <b>Instantaneous Forward Voltage Drop</b><br>( $T_A = 25^\circ C$ , 300 – 500 $\mu s$ Pulse)                                         | $I_F = 1 \text{ mADC}$<br>$V_{F1}$  | —       | 0.41 | —       | 0.41 | $V_{DC}$ |
|                                                                                                                                      | $I_F = 15 \text{ mADC}$<br>$V_{F2}$ | —       | 1.0  | —       | —    |          |
|                                                                                                                                      | $I_F = 35 \text{ mADC}$<br>$V_{F3}$ | —       | —    | —       | 1.0  |          |
| <b>Instantaneous Forward Voltage Drop</b><br>( $T_A = -55^\circ C$ , 300 – 500 $\mu s$ Pulse)                                        | $I_F = 1 \text{ mADC}$<br>$V_{F4}$  | —       | 0.55 | —       | 0.55 | $V_{DC}$ |
|                                                                                                                                      | $I_F = 15 \text{ mADC}$<br>$V_{F5}$ | —       | 1.0  | —       | —    |          |
|                                                                                                                                      | $I_F = 35 \text{ mADC}$<br>$V_{F6}$ | —       | —    | —       | 1.0  |          |
| <b>Reverse Leakage Current</b><br>( $T_A = 25^\circ C$ , $V_R = \text{Rated}$ , 300 $\mu s$ Minimum Pulse)                           | $IR_1$                              | —       | 200  | —       | 150  | nA       |
| <b>Reverse Leakage Current</b><br>( $T_A = 100^\circ C$ , $V_R = \text{Rated}$ , 300 $\mu s$ Minimum Pulse)                          | $IR_2$                              | —       | 200  | —       | 150  | $\mu A$  |
| <b>Junction Capacitance</b><br>( $V_R = 0 \text{ VDC}$ , $V_{SIG} = 50 \text{ mV}_{PK}$ , $T_A = 25^\circ C$ , $f = 1 \text{ MHz}$ ) | SPD5711 and SPD5712<br>$C_{J1}$     | —       | 2.0  | —       | 2.0  | pF       |
|                                                                                                                                      | SPD5711A and SPD5712A<br>$C_{J2}$   | —       | 1.2  | —       | 1.2  |          |

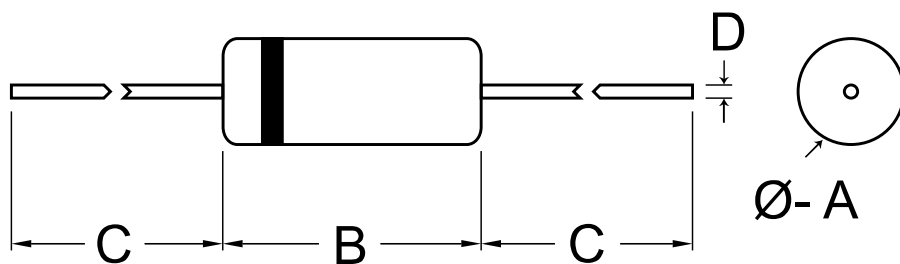
**Notes:**

1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

3/ Maximum Ratings and Electrical Characteristics @  $25^\circ C$  Unless Otherwise Specified.

**Case Outline:**



Note: Lead Diameter is not controlled within 0.050" of the diode body.

**DIMENSIONS**

| DIM | MIN.   | MAX.   |
|-----|--------|--------|
| A   | 0.068" | 0.076" |
| B   | 0.150" | 0.170" |
| C   | 1.00"  | 1.50"  |
| D   | 0.014" | 0.022" |

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

**DATA SHEET #: RS0008B**

**DOC**