

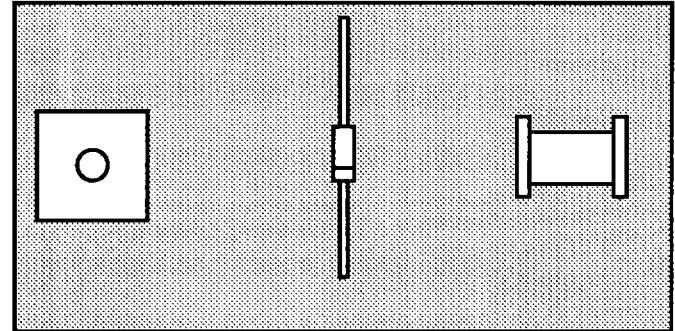
SCHOTTKY BARRIER DIODES

FOR GENERAL PURPOSE APPLICATIONS



FEATURES

- High Breakdown Voltage to 70 Volts
- Available in Chips, Glass Package Or Double Slug Melf Package
- 1N5711 Available in JAN, JANTX and JANTXV
- Packages Metallurgically Bonded



CD5711
CD5712
CD2810

1N5711
DSB5712
DSB2810

CDLL5711
CDLL5712
CDLL2810
CDLL6263

MAXIMUM RATINGS

Operating Temperatures -65°C to +150°C
Storage Temperatures -65°C to +150°C
Power Dissipation 250 mW @ 25°C
Power Derating 2 mW/°C above 25°C

DESCRIPTION

This family of devices are silicon Schottky barrier diodes with silicon dioxide passivated junctions to achieve high breakdown voltages and low leakages. These devices used in either chips, low cost glass packages or low cost surface mount leadless MELF packages are useful for high level detectors, mixers, pico-second switching or gating, sampling and wave shaping circuits.

ELECTRICAL SPECIFICATIONS AT 25°C

TYPE NUMBER	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM FORWARD VOLTAGE	MINIMUM FORWARD CURRENT $V_F = 1$ VOLT	MAXIMUM REVERSE LEAKAGE CURRENT		MAXIMUM CAPACITANCE @ $V_R = 0$ VOLTS, $f = 1.0$ MHz
	$V_{BR} @ 10$ mA	$V_F @ 1$ mA	I_F	$I_R @ V_R$		C_T
	VOLTS	VOLTS	MILLIAMPS	NA	VOLTS	PICO FARADS

CHIPS

CD2810	20	0.41	35	100	15	1.2
CD5711	70	0.41	15	200	50	2.0
CD5712	20	0.41	35	150	16	1.2

AXIAL LEAD GLASS PACKAGE

DSB2810	20	0.41	35	100	15	2.0
1N5711	70	0.41	15	200	50	2.0
DSB5712	20	0.41	35	150	16	2.0

MELF PACKAGE

CDLL2810	20	0.41	35	100	15	2.0
CDLL5711	70	0.41	15	200	50	2.0
CDLL5712	20	0.41	35	150	16	2.0
CDLL6263	60	0.41	15	200	50	2.2

Notes:

1. Effective Minority Carrier Lifetime (τ) is 100 Pico Seconds.
2. These devices manufactured by CDI, USA.
3. Other packages available upon request.

MTLXS022

TYPICAL CHARACTERISTICS

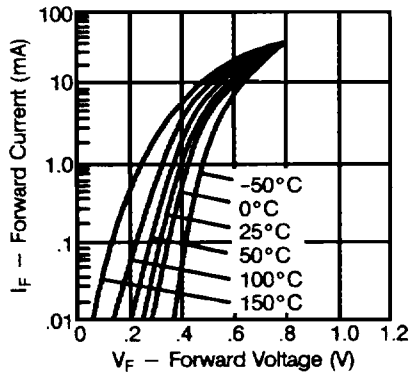


Figure 1. I-V Curve Showing Typical Forward Voltage Variation with Temperature for the DSB5712 and DSB2810 Schottky Diodes.

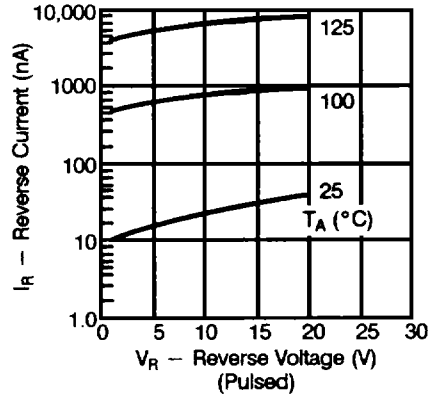


Figure 2. DSB5712 and DSB2810 Typical Variation of Reverse Current (I_R) vs. Reverse Voltage (V_R) at Various Temperatures.

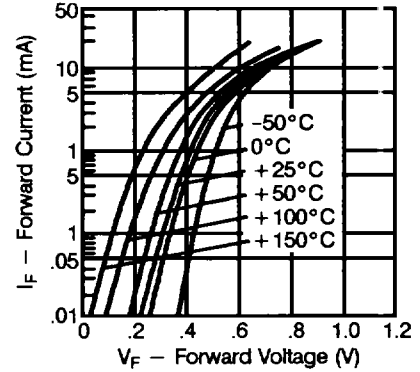
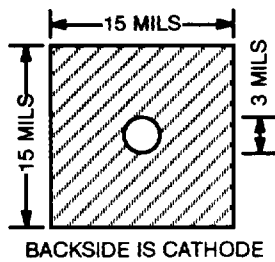


Figure 3. I-V Curve Showing Typical Forward Voltage Variation with Temperature for Schottky Diode IN5711

CHIP OUTLINE



BACKSIDE IS CATHODE

METALLIZATION:

Top : (Anode) Al
 Back: (Cathode) Au
 AL THICKNESS 12000 Å Min
 GOLD THICKNESS 3000 Å Min
 CHIP THICKNESS 15 Mils Max

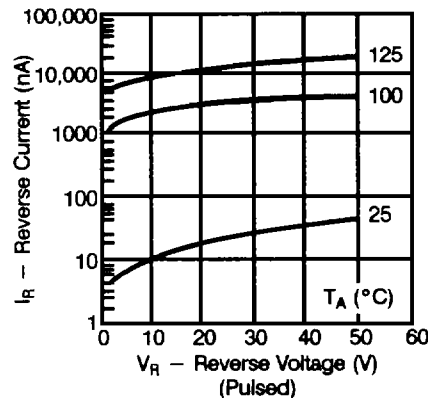


Figure 4. IN5711 Typical Variation of Reverse Current (I_R) vs. Reverse Voltage (V_R) at Various Temperatures.

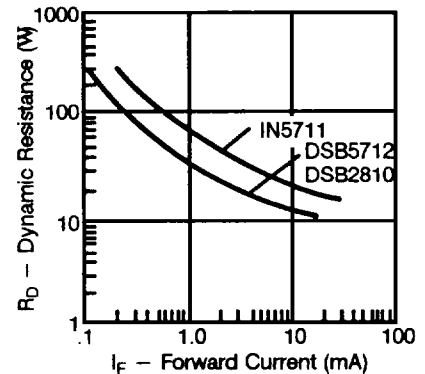
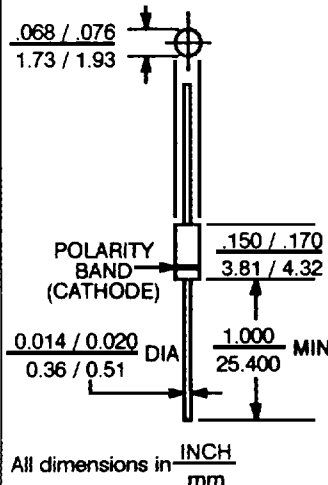


Figure 5. Typical Dynamic Resistance (R_D) vs. Forward Current (I_F)

AXIAL LEAD GLASS OUTLINE



CASE: Hermetically sealed glass case per MIL-S-19500/444, DO-35

LEAD MATERIAL: Copper clad steel.

LEAD FINISH: Tin Plate

THERMAL RESISTANCE: 250 °C/W (Typical) junction to ambient.

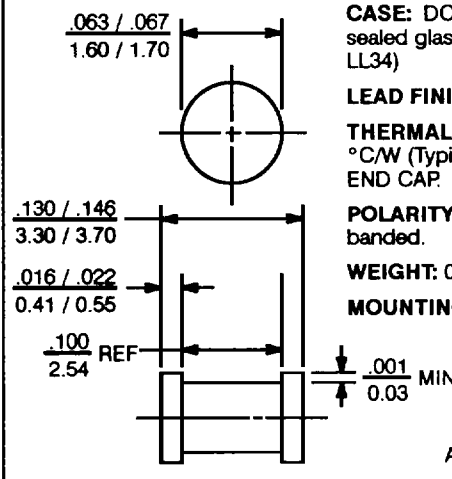
POLARITY: Cathode end is banded.

WEIGHT: 0.2 grams.

MOUNTING POSITION: Any.

All dimensions in $\frac{\text{INCH}}{\text{mm}}$

MELF OUTLINE



CASE: DO-213AA, Hermetically sealed glass case. (MELF, SOD-80, LL34)

LEAD FINISH: Tin/Lead

THERMAL RESISTANCE: 100 °C/W (Typical) junction to END CAP.

POLARITY: Cathode end is banded.

WEIGHT: 0.05 grams (Typical)

MOUNTING POSITION: Any.

All dimensions in $\frac{\text{INCH}}{\text{mm}}$