

SCHOTTKY BARRIER DIODES – LOW REVERSE LEAKAGE CHARACTERISTICS – METALLURGICALLY BONDED

Qualified per MIL-PRF-19500/444

DEVICES

1N5711-1 1N6857-1 *DSB2810 *1N5711
1N5712-1 1N6858-1 *DSB5712

* These devices are only available as Commercial Level Product.

LEVELS

JAN
JANTX
JANTXV

*COMMERCIAL

MAXIMUM RATING AT 25°C

Operating Temperature: -65°C to +150°C
Storage Temperature: -65°C to +150°C
Operating Current: 5711 types :33mA dc @ $T_L = +130^\circ\text{C}$, L = 3/8"
2810, 5712 & 6858 types :75mA dc @ $T_L = +110^\circ\text{C}$, L = 3/8"
6857 type :75mA dc @ $T_L = +70^\circ\text{C}$, L = 3/8"
Derating: all types: Derate to 0 (zero) mA @ +150°C

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$, unless otherwise specified)

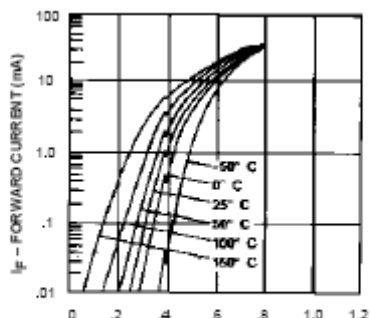
TYPE NUMBER	MINIMUM BEAKDOWN VOLTAAGE	MAXIMUM FORWARD VOLTAGE	MAXIMUM FORWARD VOLTAGE	MAXIMUM REVERSE LEAKAGE CURRENT		MAXIMUM CAPACITANCE @ $V_R = 0$ VOLTS $f = 1.0\text{MHz}$	ESDS CLASS
	$V_{BR} @ 10\mu\text{A}$	$V_F @ 1\text{mA}$	$V_F @ I_F$	$I_R @ V_R$		C_T	
	VOLTS	VOLTS	MILLIAMPS	nA	VOLTS	PICO FARADS	
DSB2810	20	0.41	1.0 @ 35	100	15	2.0	1
1N5711, -1	70	0.41	1.0 @ 15	200	50	2.0	1
DSB5712	20	0.41	1.0 @ 35	150	16	2.0	1
1N5712-1	20	0.41	1.0 @ 35	150	16	2.0	1
1N6857-1	20	0.35	0.75 @ 35	150	16	4.5	2
1N6858-1	70	0.36	0.65 @ 15	200	50	4.5	2



DO-35

GRAPHS

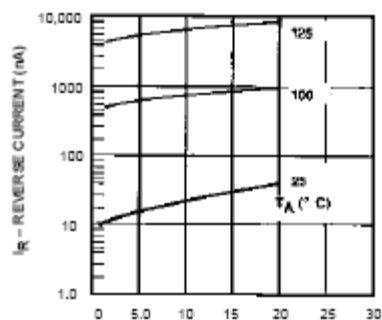
FIGURE 1



V_F – FORWARD VOLTAGE (V)

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

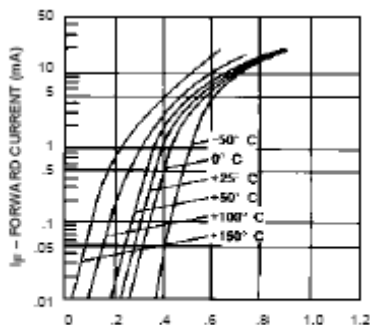
FIGURE 2



V_R – FORWARD VOLTAGE (V)
(PULSED)

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

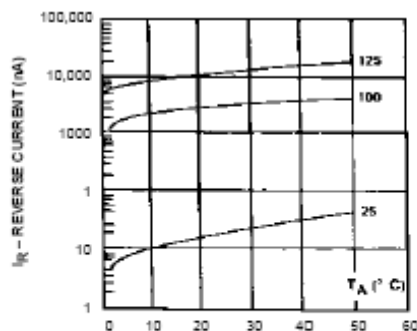
FIGURE 3



V_F – FORWARD VOLTAGE (V)

I – V Curve Showing Typical Forward Voltage Variation with Temperature for Schottky Diode 1N5711.

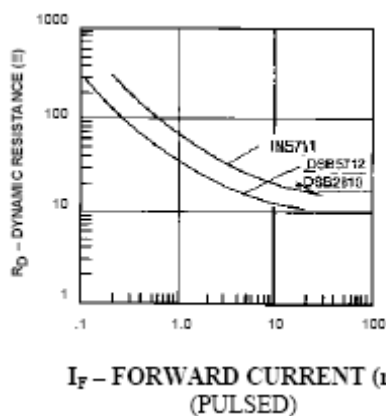
FIGURE 4



V_R – REVERSE VOLTAGE (V)
(PULSED)

1N5711 Typical; Variation of Reverse Current (I_R) vs. Reverse Voltage (V_R) at Various Temperatures.

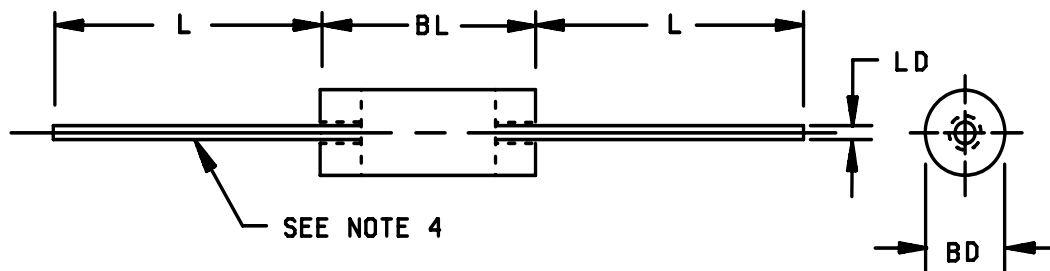
FIGURE 5



I_F – FORWARD CURRENT (mA)
(PULSED)

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

PACKAGE DIMENSIONS



NOTE:

1. Dimensions are in inches. Millimeters are given for general information only.
2. Dimensions BL and LD include all components of the diode periphery except the sections of the leads over which the diameter is controlled.
3. Dimension BD shall be measured at the largest diameter.
4. In accordance with ASME Y14.5M, diameters are equivalent to Φ symbology.
5. Effective Minority Carrier Lifetime (τ) is 100 Pico Seconds

Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
BD	.068	.076	1.73	1.93	2, 3
BL	.125	.170	3.18	4.32	2
LD	.014	.022	0.36	0.56	
LL	1.000	1.500	25.40	38.10	

FIGURE 1 Physical dimensions, (DO-35)
1N5711-1, 1N5712-1, 1N6857-1, and 1N6858-1

DESIGN DATA

Case: Hermetically sealed glass case per MIL-PRF-19500/444 and /445 DO-35 outline.

Lead Material: Copper clad steel.

Lead Finish: Tin / Lead

Thermal Resistance: ($R_{\theta JC}$): 250°C/W maximum at L = .375 inch

Thermal Impedance ($Z_{\theta JX}$): ($Z_{\theta JX}$): 40°C/W maximum.

Polarity: Cathode end is banded.

Mounting Position: Any.