TECHNICAL DATA SHEET

6 Lake Street, Lawrence, MA 01841
1-800-446-1158 / (978) 620-2600 / Fax: (978) 689-0803
Website: http://www.microsemi.com

Gort Road Business Park, Ennis, Co. Clare, Ireland
Tel: +353 (0) 65 6840044 Fax: +353 (0) 65 6822298

SCHOTTKY BARRIER DIODES – LEADLESS PACKAGE FOR SURFACE MOUNT
– METALLURGICALLY BONDED
– DOUBLE PLUG CONSTRUCTION

Qualified per MIL-PRF-19500/444

DEVICES

1N5711UR-1	**1N6857UR-1**	**CDLL2810**	**CDLL6263**
1N5712UR-1	**1N6858UR-1**	**CDLL5711**	**CDLL6857**
		CDLL5712	**CDLL6858**

QUALIFIED LEVELS
JAN
JANTX
JANTXV

MAXIMUM RATING AT 25°C

Operating Temperature:	-65°C to +150°C	
Storage Temperature:	-65°C to +150°C	
Operating Current:	5711 & 6263 types	:33mA dc @ T_{EC} = +140°C
	2810, 5712 & 6858 types	:75mA dc @ T_{EC} = +130°C
	6857 type	:150mA dc @ T_{EC} = +110°C
Derating:	all types	:Derate to 0 (zero) mA dc @ +150°C

ELECTRICAL CHARACTERISTICS ***(TA = 25°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 = 1.0MHz	ESDS CLASS
	V_{BR} @ 10µA	V_F @ 1mA	V_F @ I_F	I_R @ V_R		C_T	
	VOLTS	VOLTS	VOLTS @ mA	nA	VOLTS	PICO FARADS	
1N5711UR-1	70	0.41	1.0 @ 15	200	50	2.0	0
1N5712UR-1	20	0.41	1.0 @ 35	150	16	2.0	0
1N6857UR-1	20	0.35	0.75 @ 35	150	16	4.5	0
1N6858UR-1	70	0.36	0.65 @ 15	200	50	4.5	0
CDLL2810	20	0.41	1.0 @ 35	100	15	2.0	0
CDLL5711	70	0.41	1.0 @ 15	200	50	2.0	0
CDLL5712	20	0.41	1.0 @ 35	150	16	2.0	0
CDLL6263	60	0.41	1.0 @ 15	200	50	2.2	0
CDLL6857	20	0.35	0.75 @ 35	150	16	4.5	0
CDLL6858	70	0.36	0.65 @ 15	200	50	4.5	0

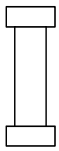

FIGURE 1

NOTE:

1. Effective Minority Carrier Lifetime (τ) is 100 Pico Seconds
2. Qualification testing to J, JX, JV and JS levels for 6857 and 6858 types is underway. Contact the factory for qualification completion dates. These two part numbers are being introduced by CDI as "drop-in" replacements for the 5711 and 5712. They provide a more robust mechanical design and a higher ESDS class with the only trade-off being an increase in capacitance.

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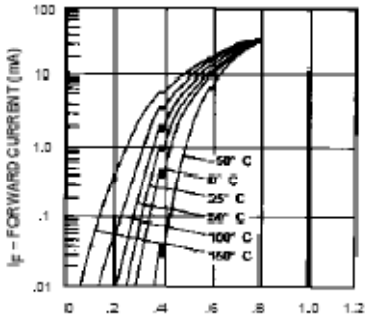
GRAPHS

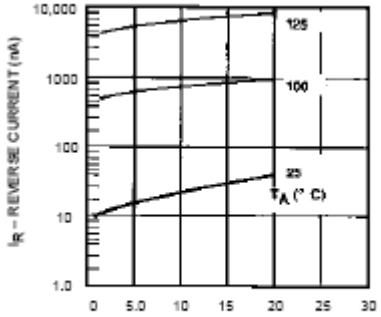
FIGURE 1



V_F – FORWARD VOLTAGE (V)

I – V Curve Showing Typical Forward Voltage Variation with Temperature for the CDLL2810 and CDLL5712 Schottky Diodes.

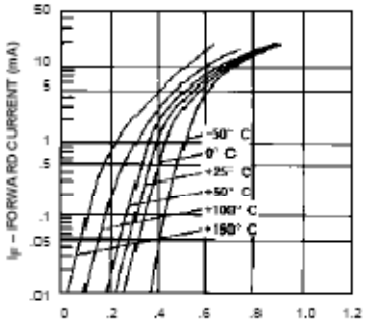
FIGURE 2



V_R – FORWARD VOLTAGE (V)
(PULSED)

CDLL2810 and CDLL5712 Typical Variation of Reverse Current (I_R) vs. Reverse Voltage (V_R) at Various Temperatures

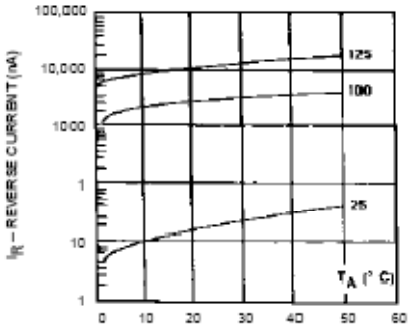
FIGURE 3



V_F – FORWARD VOLTAGE (V)

I – V Curve Showing Typical Forward Voltage Variation with Temperature for Schottky Diode CDLL5711.

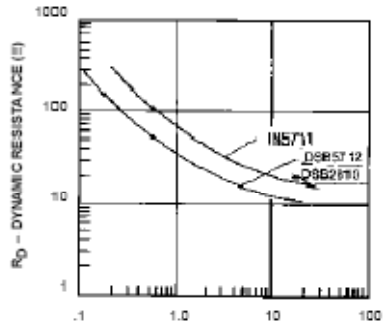
FIGURE 4



V_R – REVERSE VOLTAGE (V)
(PULSED)

CDLL5711 Typical; Variation of Reverse Current (I_R); vs. ReverseVoltage (V_R) at Various Temperatures.

FIGURE 5



I_F – FORWARD CURRENT (mA)
(PULSED)

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

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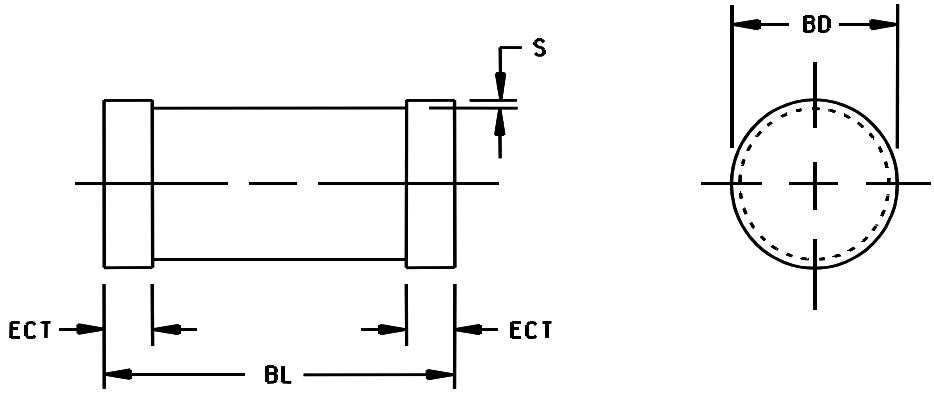
PACKAGE DIMENSIONS



NOTE:

1. Dimensions are in inches. Millimeters are given for general information only.
2. In accordance with ASME Y14.5M, diameters are equivalent to Φx symbology.

Symbol	Dimensions				Notes
	Inches		Millimeters		
	Min	Max	Min	Max	
BD	.063	.067	1.60	1.70	
BL	.130	.146	3.30	3.71	
ECT	.016	.022	0.41	0.55	
S	.001 Min				

DESIGN DATA

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

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\theta JEC}$): 100°C/W maximum at L = 0 inch

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

POLARITY: Cathode end is banded.

MOUNTING POSITION SURFACE SELECTION: The Axial Coefficient of Expansion (COE) of this device is approximately +6PPM/°C. The COE of the Mounting Surface System should be selected to provide a suitable match with this device.