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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# SILICON DUAL SCHOTTKY POWER RECTIFIER

## 35 Amp, 100 Volt

Qualified per MIL-PRF-19500/730

*Qualified Levels:  
JAN, JANTX, and  
JANTXV*

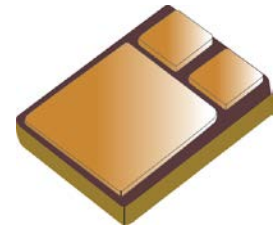
### DESCRIPTION

This low-profile, Dual Schottky rectifier device is military qualified up to a JANTXV level for high-reliability applications. Microsemi also offers numerous other products to meet higher and lower power voltage regulation applications.

**Important:** For the latest information, visit our website <http://www.microsemi.com>.

### FEATURES

- JEDEC registered equivalent of 1N7037.
- Hermetically sealed surface mount ceramic package.
- JAN, JANTX, and JANTXV qualifications are available per MIL-PRF-19500/730.
- RoHS compliant versions available (commercial grade only).



**U1 (SMD-1)  
Package**

Also available in:

 **TO-254 package**  
(leaded)

[1N7043CAT1](#) & [1N7043CCT1](#)

### APPLICATIONS / BENEFITS

- Low forward voltage drop.
- High frequency operation.
- Lightweight.

### MAXIMUM RATINGS @ $T_A = +25^\circ\text{C}$ unless otherwise noted

Parameters/Test Conditions	Symbol	Value	Unit
Junction and Storage Temperature	$T_J$ and $T_{STG}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance Junction-to-Case (1.6 $^\circ\text{C}/\text{W}$ maximum)	$R_{\theta JC}$	0.8	$^\circ\text{C}/\text{W}$
Working Peak Reverse Voltage	$V_{RWM}$	100	V
Junction Capacitance	$C_J$	600	pF
Average DC Output Current @ $T_C = 100^\circ\text{C}$	$I_O$	35	A
Non-Repetitive Sinusoidal Surge Current @ $t_p = 8.3$ ms, $T_C = +25^\circ\text{C}$	$I_{FSM}$	250	A

#### **MSC – Lawrence**

6 Lake Street,  
Lawrence, MA 01841  
Tel: 1-800-446-1158 or  
(978) 620-2600  
Fax: (978) 689-0803

#### **MSC – Ireland**

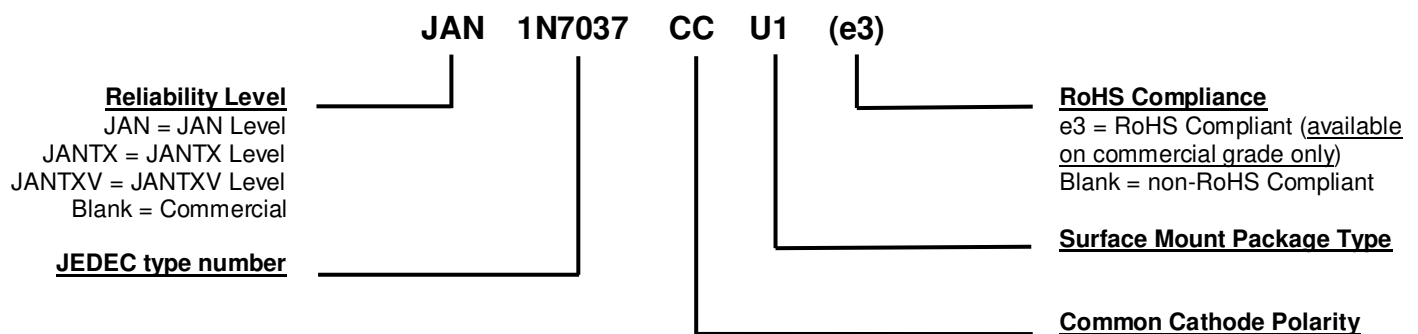
Gort Road Business Park,  
Ennis, Co. Clare, Ireland  
Tel: +353 (0) 65 6840044  
Fax: +353 (0) 65 6822298

**Website:**

[www.microsemi.com](http://www.microsemi.com)

**MECHANICAL and PACKAGING**

- CASE: Ceramic and gold over nickel plated steel.
- TERMINALS: Gold over nickel plated tungsten/copper.
- MARKING: Part number, date code, and polarity symbol.
- POLARITY: See [Schematic](#) on last page.
- WEIGHT: 2.25 grams.
- See [Package Dimensions](#) on last page.

**PART NOMENCLATURE**

**SYMBOLS & DEFINITIONS**

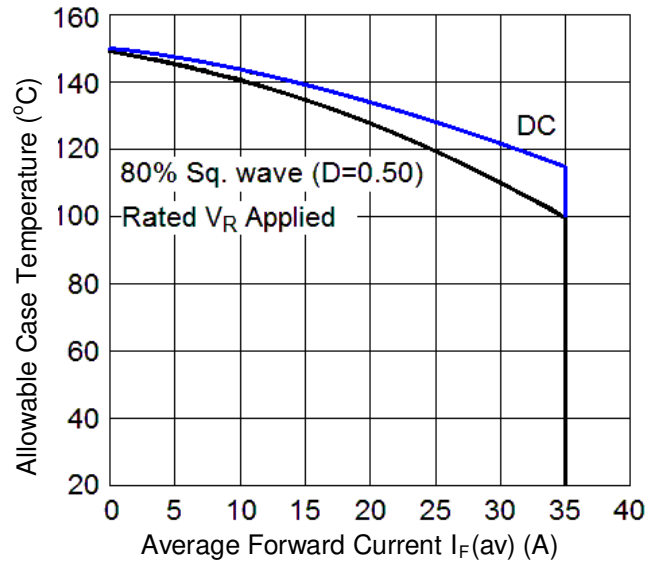
Symbol	Definition
$C_J$	Junction Capacitance: The junction capacitance in pF at a specified frequency (typically 1MHz) and specified voltage.
$I_F$	Forward Current: The forward current dc value, no alternating component.
$I_R$	Reverse Current: The maximum reverse (leakage) current that will flow at the specified voltage and temperature.
$T_J$	Junction Temperature: The temperature of a semiconductor junction.
$V_F$	Forward Voltage: The forward voltage the device will exhibit at a specified current (typically shown as maximum value).
$V_R$	Reverse Voltage: The reverse voltage dc value, no alternating component.

**ELECTRICAL CHARACTERISTICS @  $T_A = +25^\circ\text{C}$  unless otherwise noted**

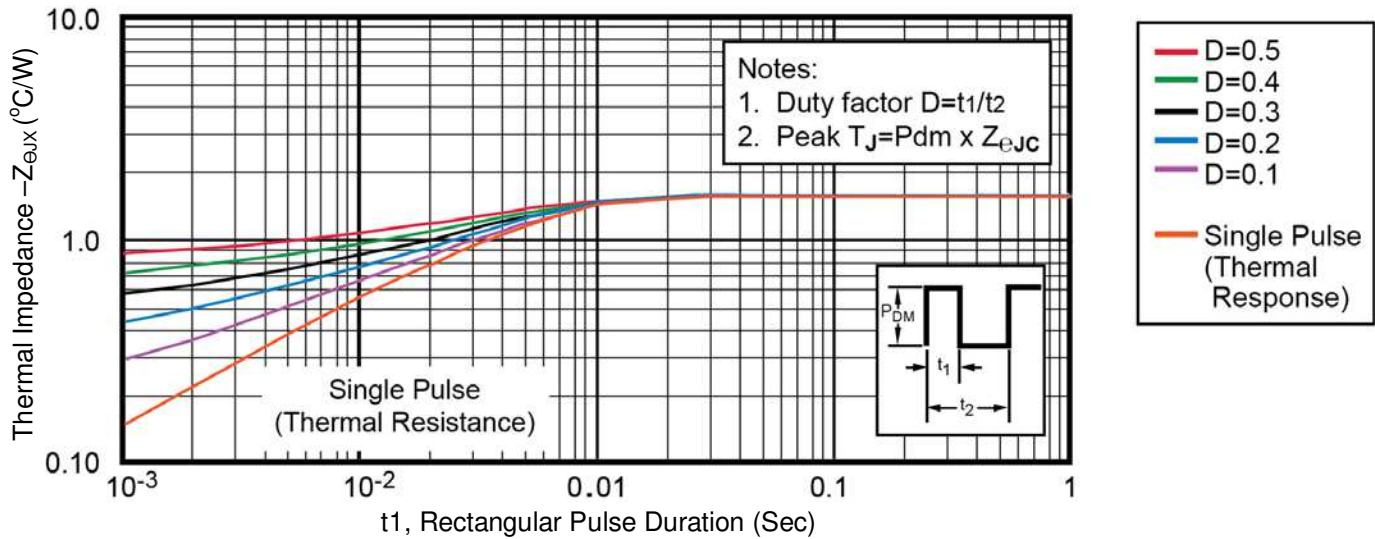
Parameters / Test Conditions	Symbol	Min.	Max.	Unit
<b>OFF CHARACTERISTICS</b>				
Forward Voltage* $I_F = 15\text{ A}$ $I_F = 35\text{ A}$ $I_F = 35\text{ A}, T_C = -55^\circ\text{C}$ $I_F = 35\text{ A}, T_C = +125^\circ\text{C}$	$V_F$		0.90 1.22 1.35 1.00	V
Reverse Current $V_R = 100\text{ V}$ $V_R = 100\text{ V}, T_C = +125^\circ\text{C}$	$I_R$		.500 15	mA

\* Pulse test: Pulse width 300  $\mu\text{sec}$ , duty cycle 2%.

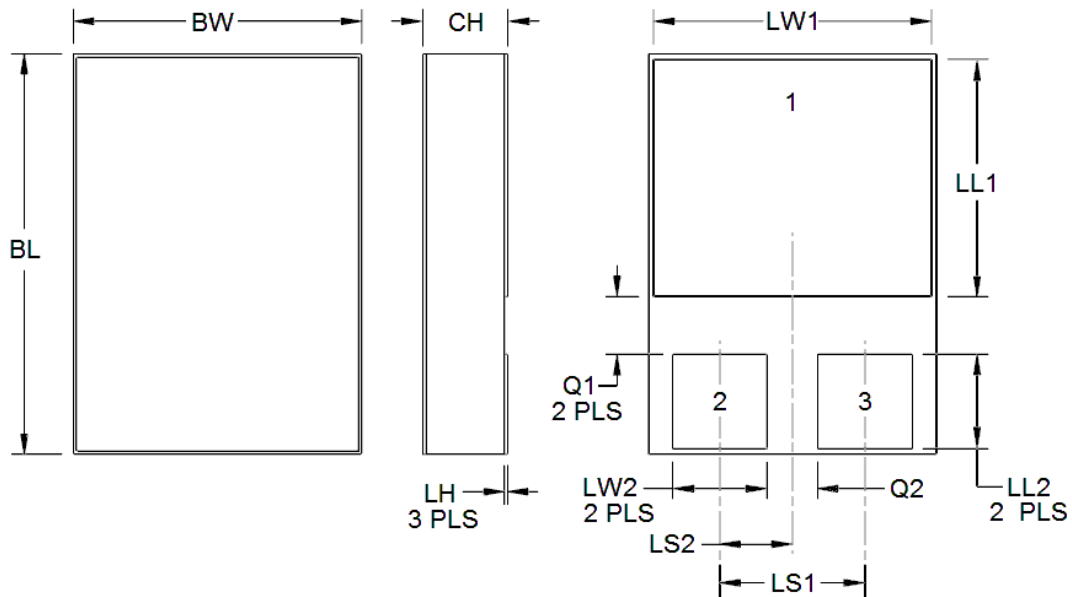
**GRAPHS**



**FIGURE 1**  
Temperature-Current Derating



**FIGURE 2**  
Thermal Impedance

**PACKAGE DIMENSIONS**

**NOTES:**

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

Symbol	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
<b>BL</b>	.620	.630	15.75	16.00
<b>BW</b>	.445	.455	11.30	11.56
<b>CH</b>	.129	.139	3.28	3.53
<b>LH</b>	.010	.020	0.26	0.51
<b>LW1</b>	.370	.380	9.40	9.65
<b>LW2</b>	.135	.145	3.43	3.68
<b>LL1</b>	.410	.420	10.41	10.67
<b>LL2</b>	.152	.162	3.86	4.12
<b>LS1</b>	.200	.220	5.08	5.59
<b>LS2</b>	.100	.110	2.54	2.79
<b>Q1</b>	.030		0.76	
<b>Q2</b>	.035		0.89	
<b>Term 1</b>	Cathode			
<b>Term 2</b>	See Schematic			
<b>Term 3</b>	See Schematic			

**SCHEMATIC**
