



# SILICON DUAL SCHOTTKY POWER RECTIFIER

## 35 Amp, 100 Volt

Qualified per MIL-PRF-19500/730

Qualified Levels:  
JAN, JANTX, and  
JANTXV

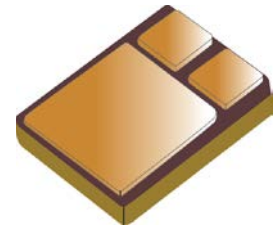
### DESCRIPTION

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:



[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

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#### **MSC – Ireland**

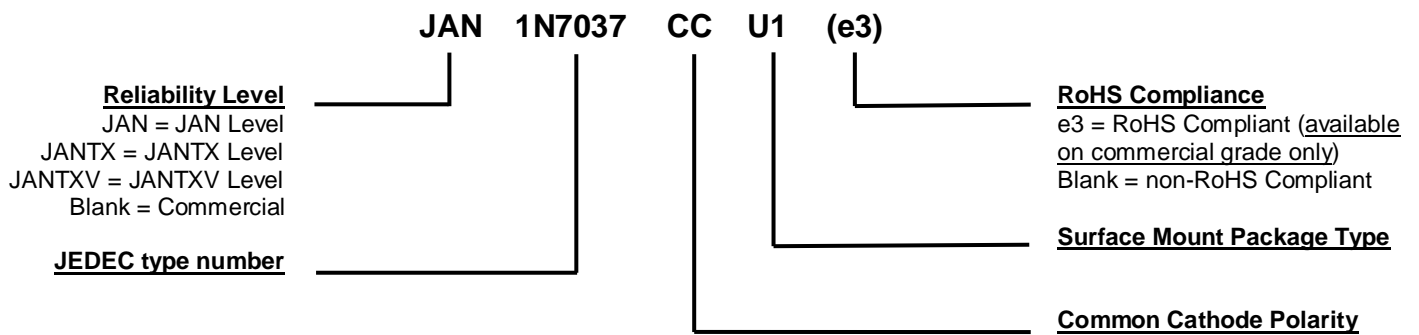
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**Website:**

[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**

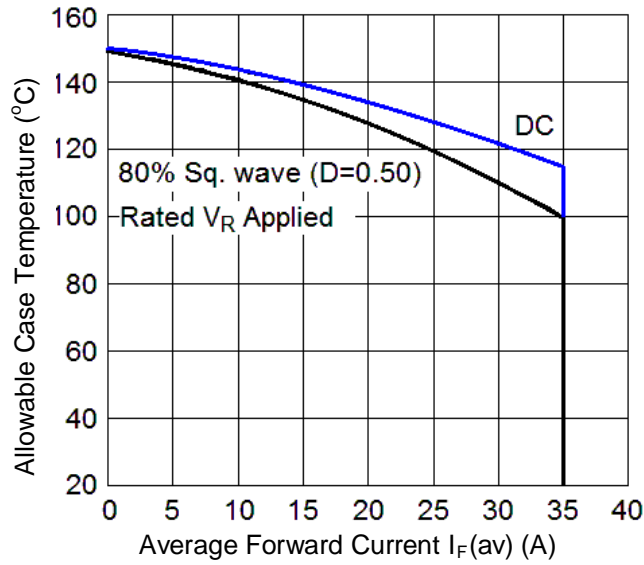
Symbol	Definition
$C_J$	Junction Capacitance: The junction capacitance in pF at a specified frequency (typically 1MHz) and specified voltage.
$I_F$	Forward Current: The forward current dc value, no alternating component.
$I_R$	Reverse Current: The maximum reverse (leakage) current that will flow at the 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 @  $T_A = +25\text{ }^\circ\text{C}$  unless otherwise noted**

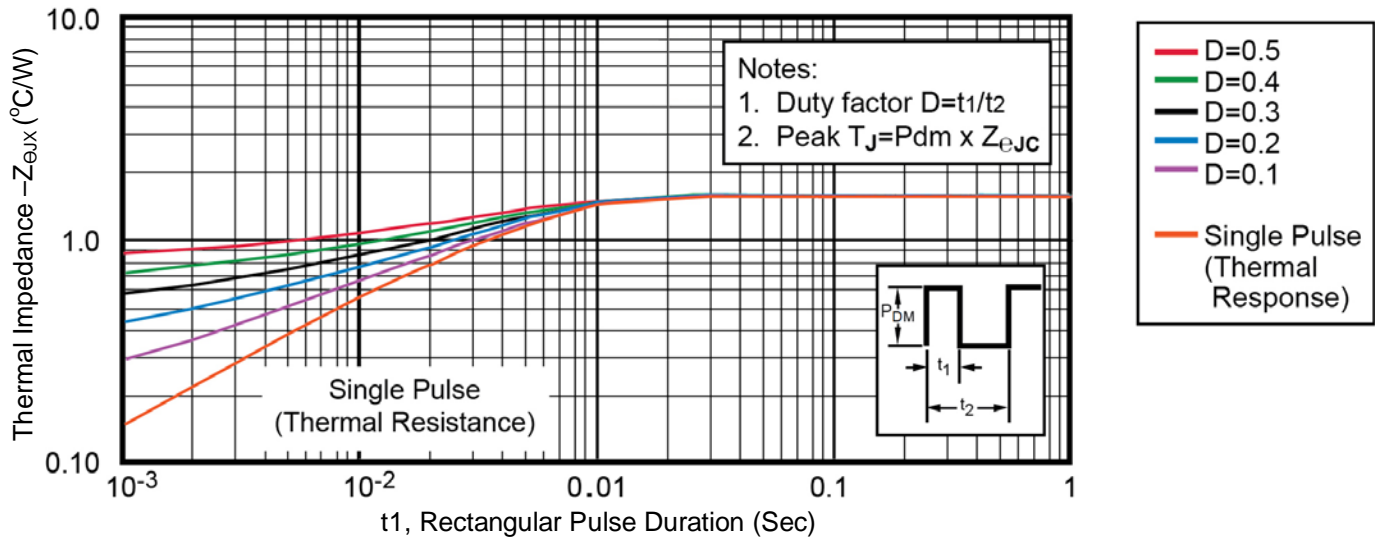
Parameters / Test Conditions	Symbol	Min.	Max.	Unit
<b>OFF CHARACTERISTICS</b>				
Forward Voltage*				
$I_F = 15\text{ A}$	$V_F$		0.90	V
$I_F = 35\text{ A}$			1.22	
$I_F = 35\text{ A}, T_C = -55\text{ }^\circ\text{C}$			1.35	
$I_F = 35\text{ A}, T_C = +125\text{ }^\circ\text{C}$			1.00	
Reverse Current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

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

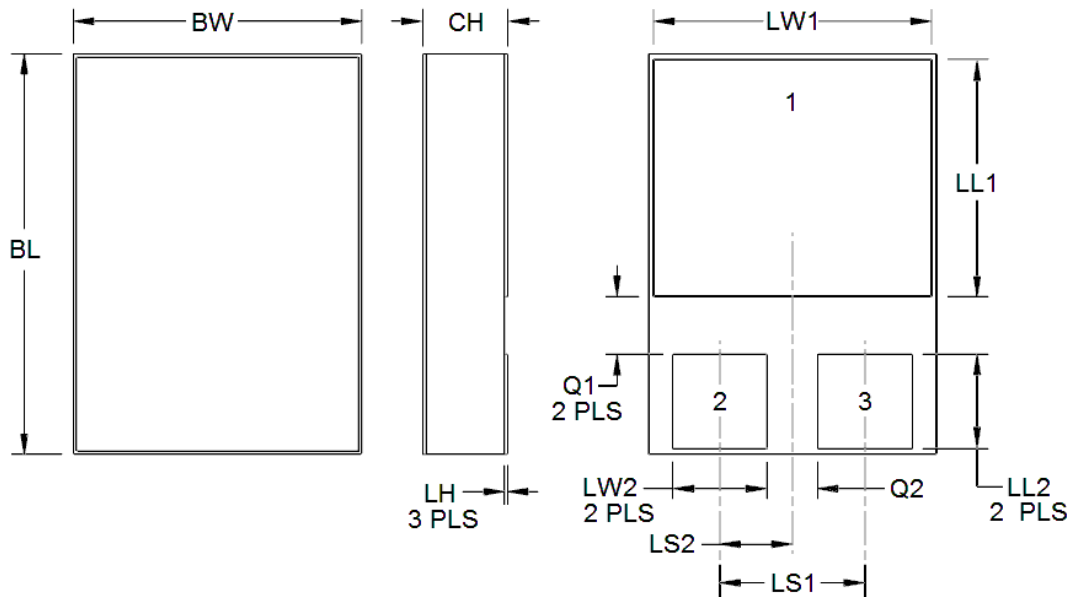
GRAPHS



**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**
