



## SILICON DUAL SCHOTTKY POWER RECTIFIER

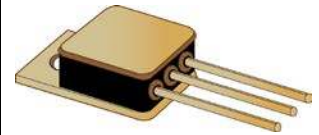
### 35 Amp, 100 Volt

Qualified per MIL-PRF-19500/730

Qualified Levels:  
JAN, JANTX, and  
JANTXV

#### DESCRIPTION

This 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.




**TO-254 Package**

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

#### FEATURES

- JEDEC registered equivalent of 1N7043.
- Hermetically isolated TO-254AA package.
- JAN, JANTX, and JANTXV qualifications are available per MIL-PRF-19500/730.
- RoHS compliant versions available (commercial grade only).

Also available in:

**U1 (SMD-1) package**  
(surface mount)  
 [1N7037CCU1](#)

#### APPLICATIONS / BENEFITS

- High frequency operation.
- Low forward voltage drop.

#### 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 (2.3 $^\circ\text{C}/\text{W}$ maximum)	$R_{\theta JC}$	1.15	$^\circ\text{C}/\text{W}$
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, $T_C = +25^\circ\text{C}$	$I_{FSM}$	175	A

#### **MSC – Lawrence**

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#### **MSC – Ireland**

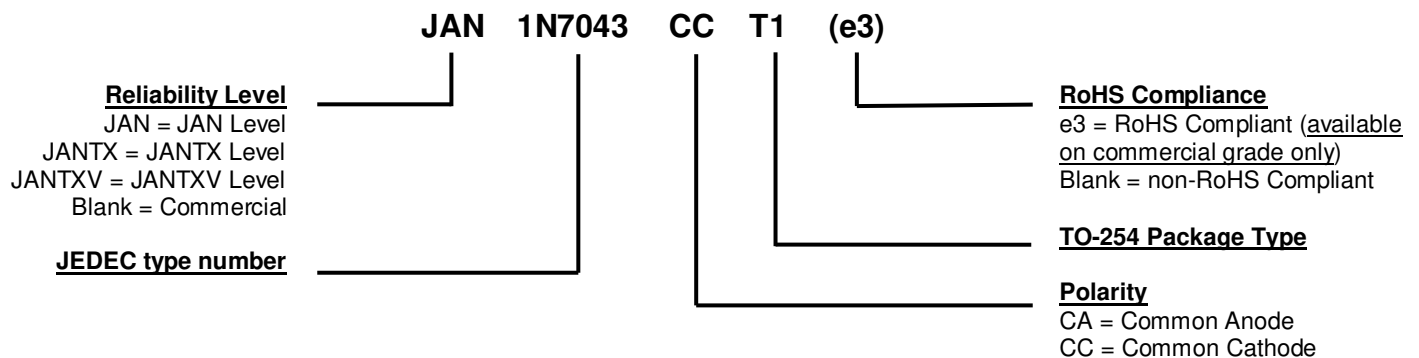
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**Website:**

[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: 6.5 grams.
- See [Package Dimensions](#) on last page.

**PART NOMENCLATURE**

**SYMBOLS & DEFINITIONS**

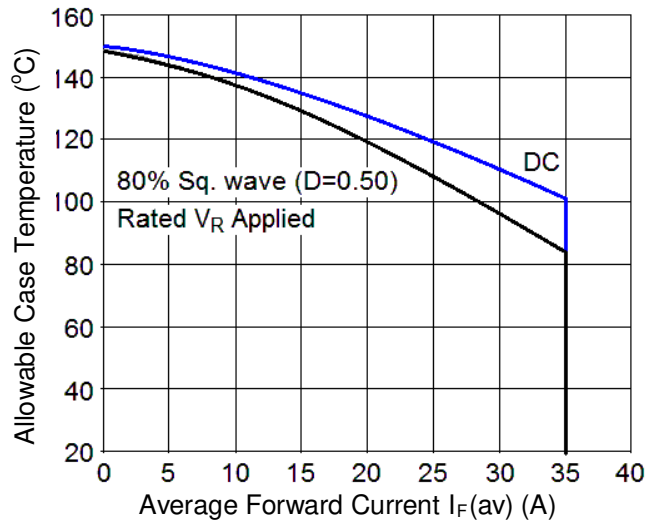
Symbol	Definition
$C_J$	Junction Capacitance: The junction capacitance in pF at a specified frequency (typically 1MHz) and specified voltage.
$I_F$	Forward Current: The forward current dc value, no alternating component.
$I_R$	Reverse Current: The maximum reverse (leakage) current that will flow at the 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**

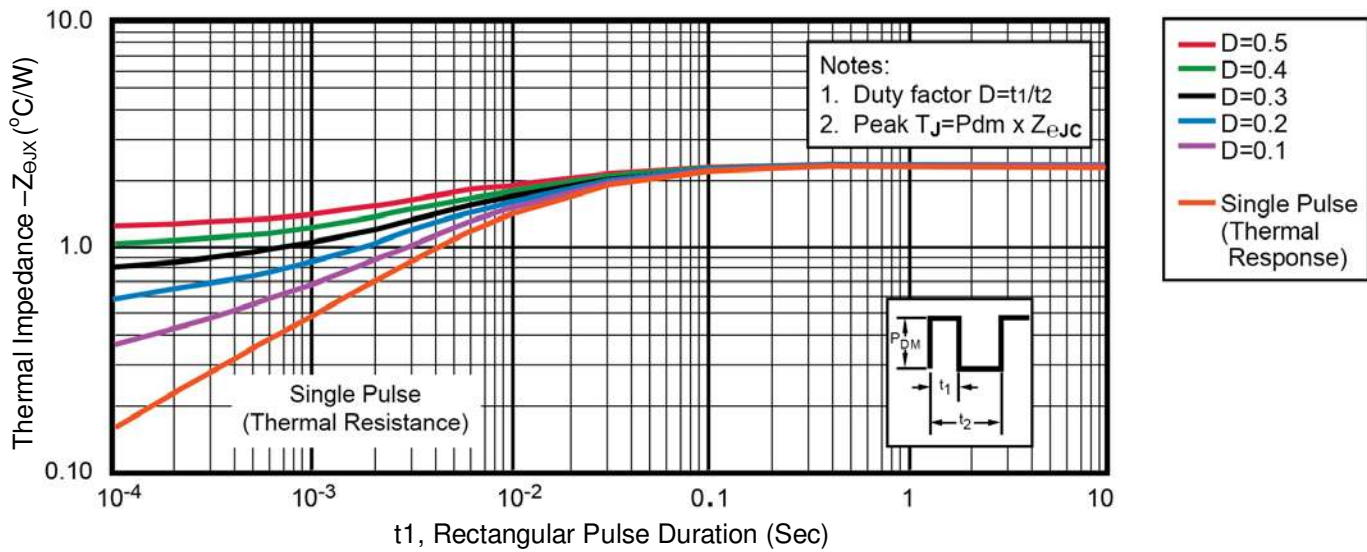
Parameters / Test Conditions	Symbol	Min.	Max.	Unit
<b>OFF CHARACTERISTICS</b>				
Forward Voltage* $I_F = 15\text{ A}$ $I_F = 35\text{ A}$ $I_F = 35\text{ A}, T_C = -55^\circ\text{C}$ $I_F = 35\text{ A}, T_C = +125^\circ\text{C}$	$V_F$		0.95 1.30 1.84 1.20	V
Reverse Current $V_R = 100\text{ V}$ $V_R = 100\text{ V}, T_C = +125^\circ\text{C}$	$I_R$		.500 15	mA

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

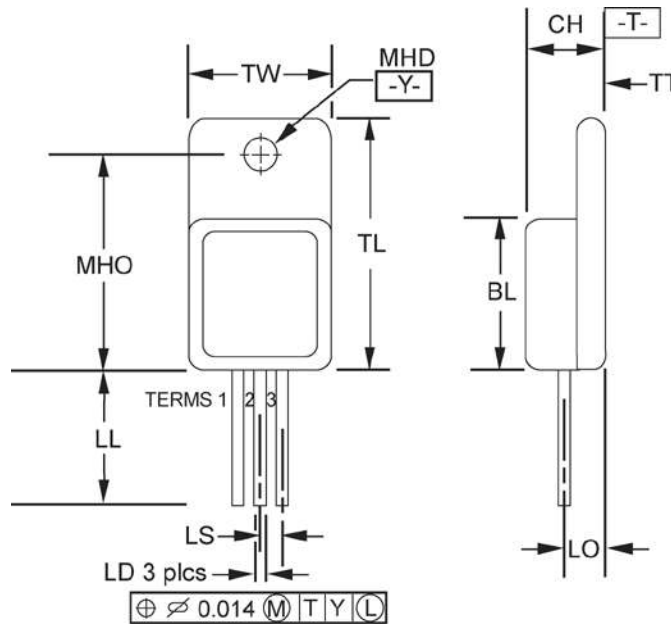
GRAPHS



**FIGURE 1**  
Temperature-Current Derating

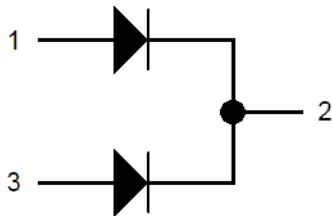


**FIGURE 2**  
Thermal Impedance

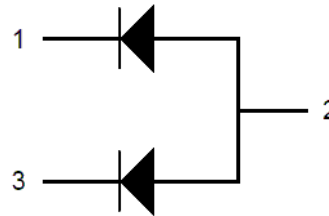
**PACKAGE DIMENSIONS**

**NOTES:**

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

Ltr	Dimensions			
	Inch		Millimeters	
	Min	Max	Min	Max
<b>BL</b>	.535	.545	13.59	13.84
<b>CH</b>	.249	.260	6.32	6.60
<b>LD</b>	.035	.045	0.89	1.14
<b>LL</b>	.510	.570	12.95	14.48
<b>LO</b>	.150 BSC		3.81 BSC	
<b>LS</b>	.150 BSC		3.81 BSC	
<b>MHD</b>	.139	.149	3.53	3.78
<b>MHO</b>	.665	.685	16.89	17.40
<b>TL</b>	.790	.800	20.07	20.32
<b>TT</b>	.040	.050	1.02	1.27
<b>TW</b>	.535	.545	13.59	13.84

**SCHEMATIC**


**1N7043CCT1**  
 TERM 1 = ANODE  
 TERM 2 = CATHODE  
 TERM 3 = ANODE



**1N7043CAT1**  
 TERM 1 = CATHODE  
 TERM 2 = ANODE  
 TERM 3 = CATHODE