

2N2646  
2N2647

**SILICON  
PN UNIJUNCTION TRANSISTORS**



**TO-18 (UJT) CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N2646 and 2N2647 devices are silicon PN Unijunction Transistors designed for general purpose industrial applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Emitter Reverse Voltage  
Interbase Voltage  
RMS Emitter Current  
Peak Emitter Current (Duty Cycle  $\leq 1\%$ , PRR  $\leq 10$ pps)  
RMS Power Dissipation  
Operating and Storage Junction Temperature

**SYMBOL**

$V_{B2E}$   
 $V_{B2B1}$   
 $I_e$   
 $i_e$   
 $P_D$   
 $T_J, T_{stg}$

**UNITS**

30  
35  
50  
2.0  
300  
-65 to +150  
V  
V  
mA  
A  
mW  
°C

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

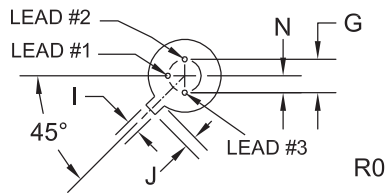
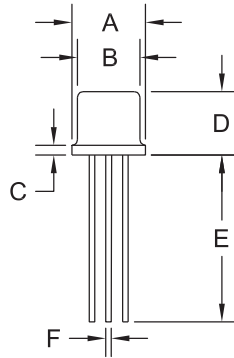
SYMBOL	TEST CONDITIONS	2N2646		2N2647		UNITS
		MIN	MAX	MIN	MAX	
$\eta$	$V_{B2B1}=10\text{V}$	0.56	0.75	0.68	0.82	
$R_{BB}$	$V_{B2B1}=3.0\text{V}$	4.7	9.1	4.7	9.1	k $\Omega$
$I_{EB2O}$	$V_{B2E}=30\text{V}$	-	12	-	0.2	$\mu\text{A}$
$I_V$	$V_{B2B1}=20\text{V}, R_{B2}=100\Omega$	4.0	-	8.0	18	mA
$I_P$	$V_{B2B1}=25\text{V}$	-	5.0	-	2.0	$\mu\text{A}$
$V_{OB1}$	$V_1=20\text{V}$	3.0	-	6.0	-	V

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TO-18 (UJT) CASE - MECHANICAL OUTLINE



**LEAD CODE:**

- 1) Emitter
- 2) Base 1
- 3) Base 2

**MARKING: FULL PART NUMBER**

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.209	0.230	5.31	5.84
B (DIA)	0.178	0.195	4.52	4.95
C	-	0.030	-	0.76
D	0.170	0.210	4.32	5.33
E	0.500	-	12.70	-
F (DIA)	0.016	0.019	0.41	0.48
G (DIA)	0.100		2.54	
H	0.050		1.27	
I	0.036	0.046	0.91	1.17
J	0.028	0.048	0.71	1.22

TO-18 (UJT) (REV: R0)

R1 (2-December 2013)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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