

2N6428  
2N6429

SILICON  
NPN TRANSISTORS



TO-92 CASE



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N6428 and 2N6429 are silicon NPN transistors manufactured by the epitaxial planar process, designed for high gain amplifier applications.

**MARKING: FULL PART NUMBER**

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

	<b>SYMBOL</b>	<b>2N6428</b>	<b>2N6429</b>	<b>UNITS</b>
Collector-Base Voltage	$V_{CBO}$	60	55	V
Collector-Emitter Voltage	$V_{CEO}$	50	45	V
Emitter-Base Voltage	$V_{EBO}$	6.0		V
Continuous Collector Current	$I_C$	200		mA
Power Dissipation	$P_D$	625		mW
Power Dissipation ( $T_C=25^{\circ}\text{C}$ )	$P_D$	1.5		W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150		$^{\circ}\text{C}$
Thermal Resistance	$\Theta_{JA}$	200		$^{\circ}\text{C/W}$
Thermal Resistance	$\Theta_{JC}$	83.3		$^{\circ}\text{C/W}$

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

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>2N6428</b>		<b>2N6429</b>		<b>UNITS</b>
		<b>MIN</b>	<b>MAX</b>	<b>MIN</b>	<b>MAX</b>	
$I_{CBO}$	$V_{CB}=30\text{V}$	-	10	-	10	nA
$I_{CEO}$	$V_{CE}=30\text{V}$	-	25	-	25	nA
$I_{EBO}$	$V_{EB}=5.0\text{V}$	-	10	-	10	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	60	-	55	-	V
$BV_{CEO}$	$I_C=1.0\text{mA}$	50	-	45	-	V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$	-	0.20	-	0.20	V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=5.0\text{mA}$	-	0.60	-	0.60	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	0.56	0.66	0.56	0.66	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\mu\text{A}$	250	-	500	-	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$	250	650	500	1250	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$	250	-	500	-	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	250	-	500	-	
$f_T$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=100\text{MHz}$	100	700	100	700	MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$	-	3.0	-	3.0	pF
$h_{ie}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	3.0	30	6.0	60	k $\Omega$
$h_{re}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	2.0	20	5.0	50	$\times 10^{-4}$
$h_{fe}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	200	800	400	1600	
$h_{oe}$	$V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$	5.0	50	10	100	$\mu\text{S}$

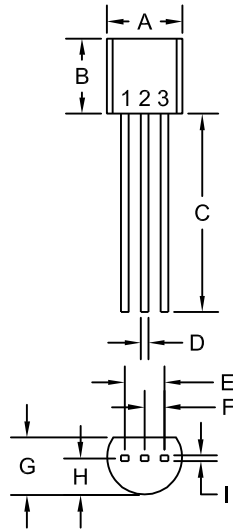
R1 (10-September 2019)

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TO-92 CASE - MECHANICAL OUTLINE



R1

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

LEAD CODE:

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

MARKING:

FULL PART NUMBER

R1 (10-September 2019)

## 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

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