

2N5172 NPN  
2N6076 PNP

**COMPLEMENTARY  
SILICON TRANSISTORS**



**TO-92 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N5172 and 2N6076 are complementary silicon small signal transistors designed for general purpose applications.

**MARKING: FULL PART NUMBER**

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

Collector-Base Voltage  
Collector-Emitter Voltage  
Emitter-Base Voltage  
Continuous Collector Current  
Power Dissipation  
Operating and Storage Junction Temperature

**SYMBOL**

$V_{CB0}$  25  
 $V_{CEO}$  25  
 $V_{EB0}$  5.0  
 $I_C$  100  
 $P_D$  625  
 $T_J, T_{stg}$  -65 to +150

**UNITS**

V  
V  
V  
mA  
mW  
 $^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=25\text{V}$			100	nA
$I_{CBO}$	$V_{CB}=25\text{V}, T_A=100^\circ\text{C}$			10	$\mu\text{A}$
$I_{CES}$	$V_{CE}=25\text{V}$			100	nA
$I_{EBO}$	$V_{EB}=5.0\text{V}$ (2N5172)			100	nA
$I_{EBO}$	$V_{EB}=3.0\text{V}$ (2N6076)			100	nA
$BV_{CEO}$	$I_C=10\text{mA}$	25			V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$			0.25	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$			0.80	V
$V_{BE(ON)}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	0.5		1.2	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	100		500	
$h_{fe}$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=1.0\text{kHz}$	100		750	
$f_T$	$V_{CB}=5.0\text{V}, I_C=2.0\text{mA}$		200		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$	1.0		13	pF

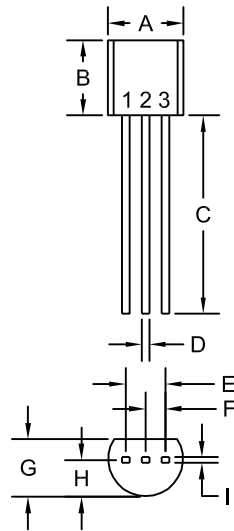
R1 (7-February 2014)

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# TO-92 CASE - MECHANICAL OUTLINE



R1

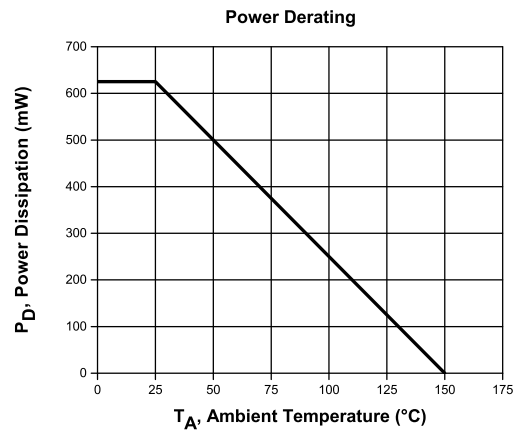
SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

## LEAD CODE:

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

MARKING:  
FULL PART NUMBER



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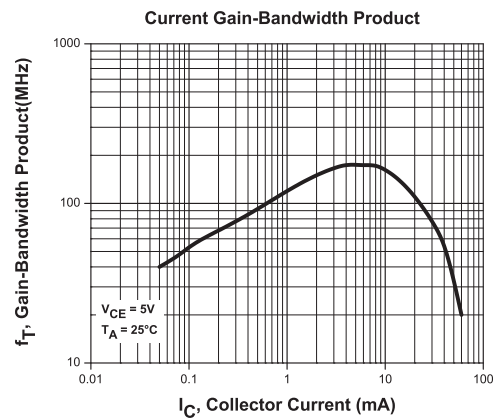
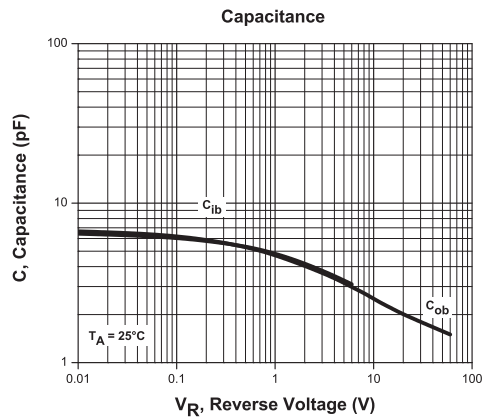
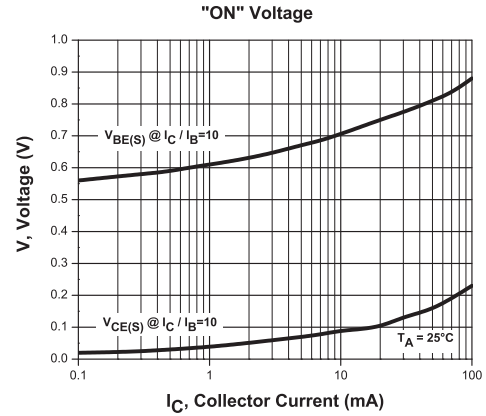
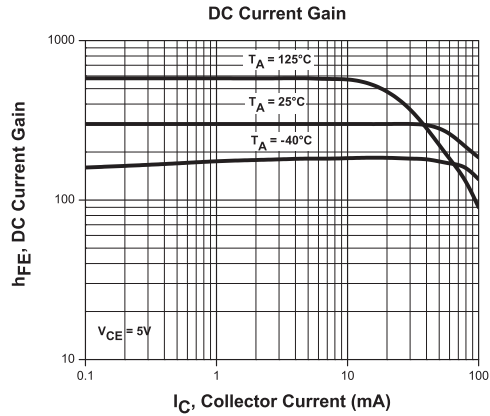
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## NPN TYPICAL ELECTRICAL CHARACTERISTICS



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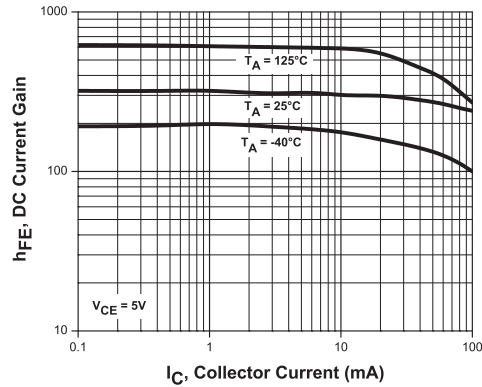
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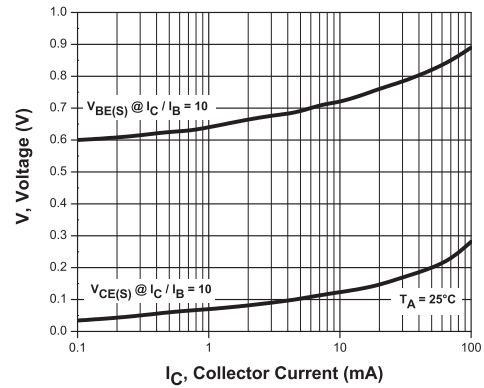


## PNP TYPICAL ELECTRICAL CHARACTERISTICS

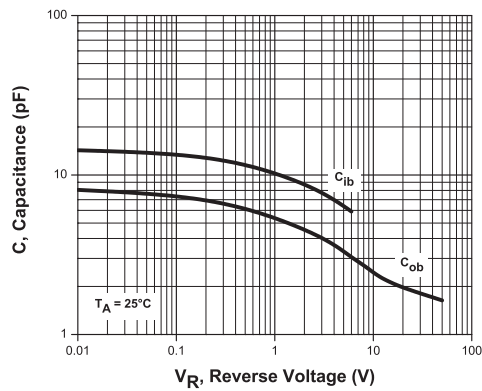
DC Current Gain



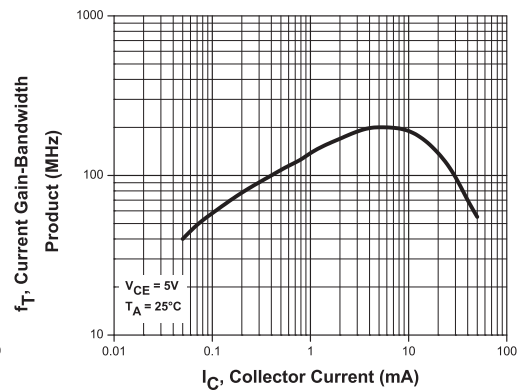
"ON" Voltage



Capacitance



Current Gain-Bandwidth Product



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## 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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