

2N5415  
2N5416

SILICON  
PNP TRANSISTORS



TO-39 CASE



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N5415 and 2N5416 are silicon PNP transistors designed for consumer and industrial line-operated 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	
Continuous Base Current	
Power Dissipation	
Operating and Storage Junction Temperature	

SYMBOL	2N5415	2N5416	UNITS
$V_{CBO}$	200	350	V
$V_{CEO}$	200	300	V
$V_{EBO}$	4.0	6.0	V
$I_C$		1.0	A
$I_B$		0.5	A
$P_D$		1.0	W
$T_J, T_{stg}$		-65 to +200	$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	2N5415		2N5416		UNITS
		MIN	MAX	MIN	MAX	
$I_{CBO}$	$V_{CB}=175\text{V}$	-	50	-	-	$\mu\text{A}$
$I_{CBO}$	$V_{CB}=280\text{V}$	-	-	-	50	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=200\text{V}, V_{EB}=1.5\text{V}$	-	50	-	-	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=300\text{V}, V_{EB}=1.5\text{V}$	-	-	-	50	$\mu\text{A}$
$I_{CEO}$	$V_{CE}=150\text{V}$	-	50	-	-	$\mu\text{A}$
$I_{CEO}$	$V_{CE}=250\text{V}$	-	-	-	50	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=4.0\text{V}$	-	20	-	-	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=6.0\text{V}$	-	-	-	20	$\mu\text{A}$
$BV_{CEO}$	$I_C=50\text{mA}$	200	-	300	-	V
$BV_{CER}$	$I_C=50\text{mA}, R_{BE}=50\Omega$	-	-	350	-	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$	-	2.5	-	2.0	V
$V_{BE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$	-	1.5	-	1.5	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=50\text{mA}$	30	150	30	120	
$h_{fe}$	$V_{CE}=10\text{V}, I_C=5.0\text{mA}, f=1.0\text{kHz}$	25	-	25	-	
$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=5.0\text{MHz}$	15	-	15	-	MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$	-	25	-	25	pF

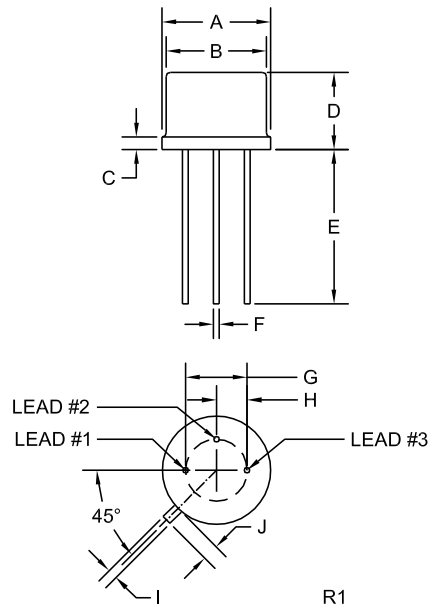
R2 (16-December 2013)

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TO-39 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)

LEAD CODE:

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

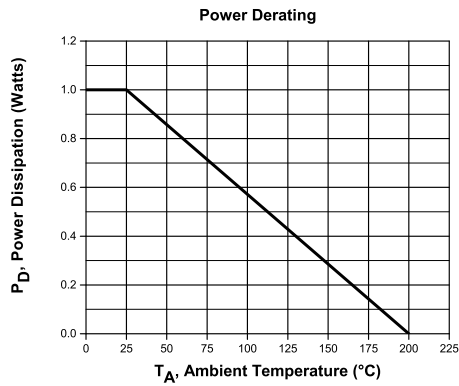
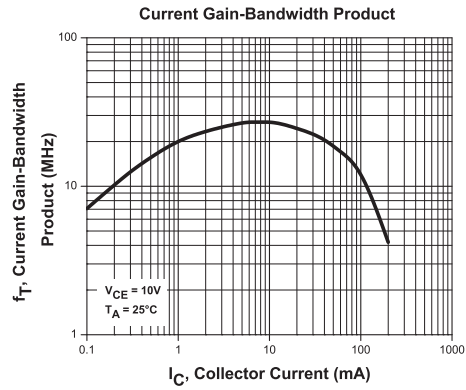
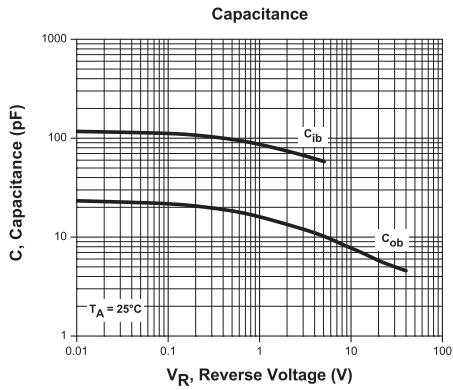
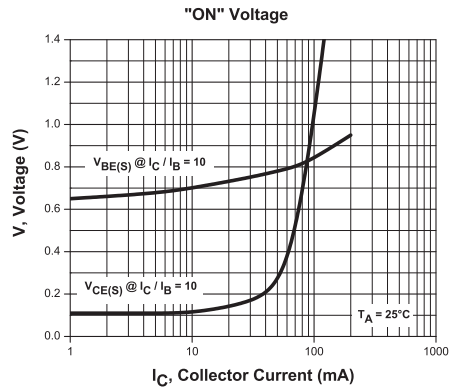
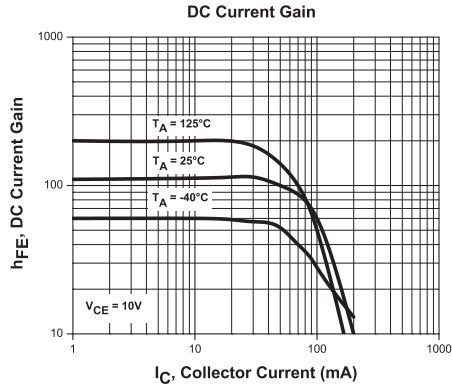
MARKING: FULL PART NUMBER

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TYPICAL ELECTRICAL CHARACTERISTICS



R2 (16-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

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