

CMPT6428
CMPT6429

**SURFACE MOUNT SILICON
NPN TRANSISTORS**



SOT-23 CASE



www.centralemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT6428 and CMPT6429 are NPN silicon transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high gain amplifier applications.

**MARKING CODES: CMPT6428: C1K
CMPT6429: C1L**

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
Thermal Resistance

SYMBOL	CMPT6428	CMPT6429	UNITS
V_{CBO}	60	55	V
V_{CEO}	50	45	V
V_{EBO}		6.0	V
I_C		200	mA
P_D		350	mW
T_J, T_{stg}		-65 to +150	$^\circ\text{C}$
θ_{JA}		357	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	CMPT6428		CMPT6429		UNITS
		MIN	MAX	MIN	MAX	
I_{CBO}	$V_{CB}=30\text{V}$	-	10	-	10	nA
I_{CEO}	$V_{CE}=30\text{V}$	-	100	-	100	nA
I_{EBO}	$V_{BE}=5.0\text{V}$	-	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
C_{ib}	$V_{BE}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$	-	8.0	-	8.0	pF

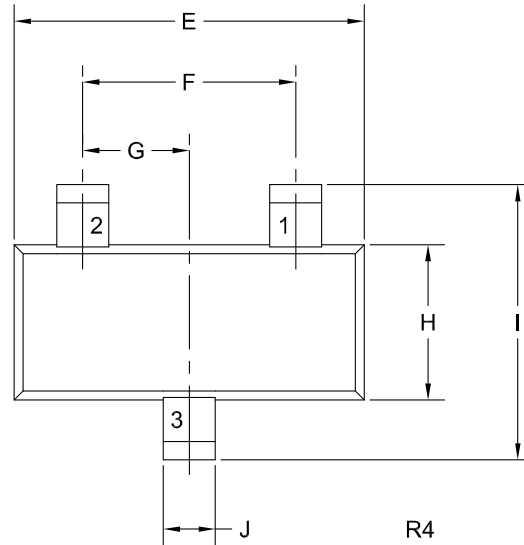
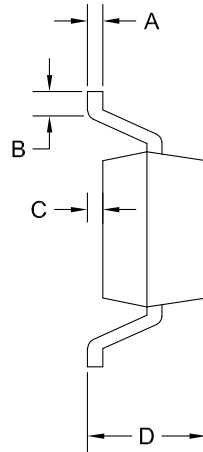
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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODES:

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DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.044	0.89	1.12
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.104	2.10	2.64
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R4)

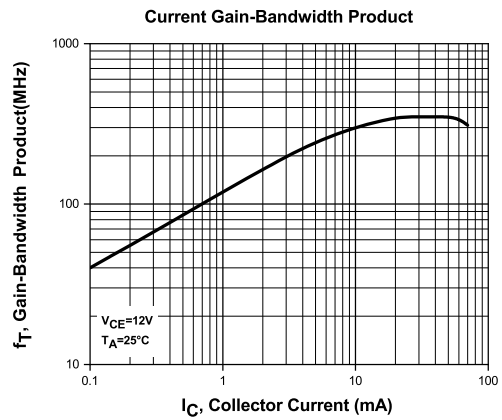
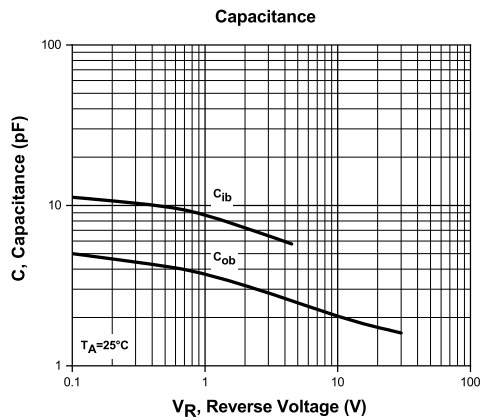
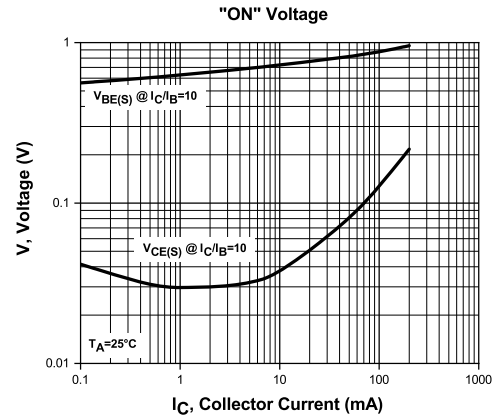
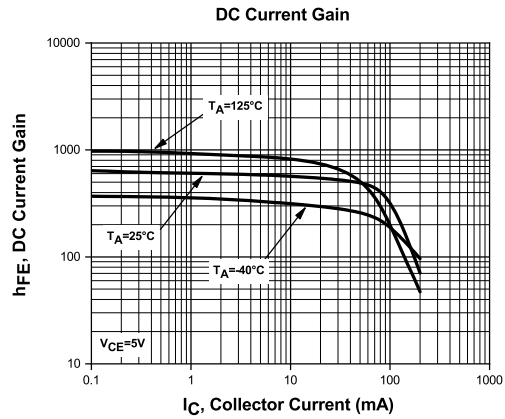
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TYPICAL ELECTRICAL CHARACTERISTICS



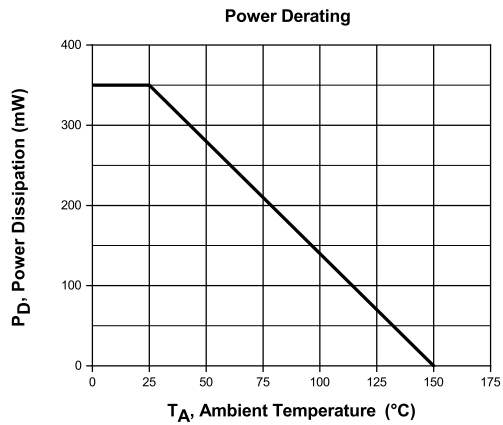
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TYPICAL ELECTRICAL CHARACTERISTICS



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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

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