

CMPT6428  
CMPT6429

**SURFACE MOUNT SILICON  
NPN TRANSISTORS**



**SOT-23 CASE**



[www.centralemi.com](http://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<sub>A</sub>=25°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 <sub>CB0</sub>                  | 60       | 55          | V     |
| V <sub>CEO</sub>                  | 50       | 45          | V     |
| V <sub>EBO</sub>                  |          | 6.0         | V     |
| I <sub>C</sub>                    |          | 200         | mA    |
| P <sub>D</sub>                    |          | 350         | mW    |
| T <sub>J</sub> , T <sub>stg</sub> |          | -65 to +150 | °C    |
| θ <sub>JA</sub>                   |          | 357         | °C/W  |

**ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C unless otherwise noted)**

| SYMBOL               | TEST CONDITIONS  | CMPT6428 |      | CMPT6429 |      | UNITS |
|----------------------|--|----------|------|----------|------|-------|
|                      |  | MIN      | MAX  | MIN      | MAX  |       |
| I <sub>CB0</sub>     | V <sub>CB</sub> =30V                                   | -        | 10   | -        | 10   | nA    |
| I <sub>CEO</sub>     | V <sub>CE</sub> =30V                                   | -        | 100  | -        | 100  | nA    |
| I <sub>EBO</sub>     | V <sub>BE</sub> =5.0V                                  | -        | 10   | -        | 10   | nA    |
| BV <sub>CB0</sub>    | I <sub>C</sub> =100μA                                  | 60       | -    | 55       | -    | V     |
| BV <sub>CEO</sub>    | I <sub>C</sub> =1.0mA                                  | 50       | -    | 45       | -    | V     |
| V <sub>CE(SAT)</sub> | I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA            | -        | 0.20 | -        | 0.20 | V     |
| V <sub>CE(SAT)</sub> | I <sub>C</sub> =100mA, I <sub>B</sub> =5.0mA           | -        | 0.60 | -        | 0.60 | V     |
| V <sub>BE(ON)</sub>  | V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA           | 0.56     | 0.66 | 0.56     | 0.66 | V     |
| h <sub>FE</sub>      | V <sub>CE</sub> =5.0V, I <sub>C</sub> =10μA            | 250      | -    | 500      | -    |       |
| h <sub>FE</sub>      | V <sub>CE</sub> =5.0V, I <sub>C</sub> =100μA           | 250      | 650  | 500      | 1250 |       |
| h <sub>FE</sub>      | V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA           | 250      | -    | 500      | -    |       |
| h <sub>FE</sub>      | V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA            | 250      | -    | 500      | -    |       |
| f <sub>T</sub>       | V <sub>CE</sub> =5.0V, I <sub>C</sub> =1.0mA, f=100MHz | 100      | 700  | 100      | 700  | MHz   |
| C <sub>ob</sub>      | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz      | -        | 3.0  | -        | 3.0  | pF    |
| C <sub>ib</sub>      | V <sub>BE</sub> =0.5V, I <sub>C</sub> =0, f=1.0MHz     | -        | 8.0  | -        | 8.0  | pF    |

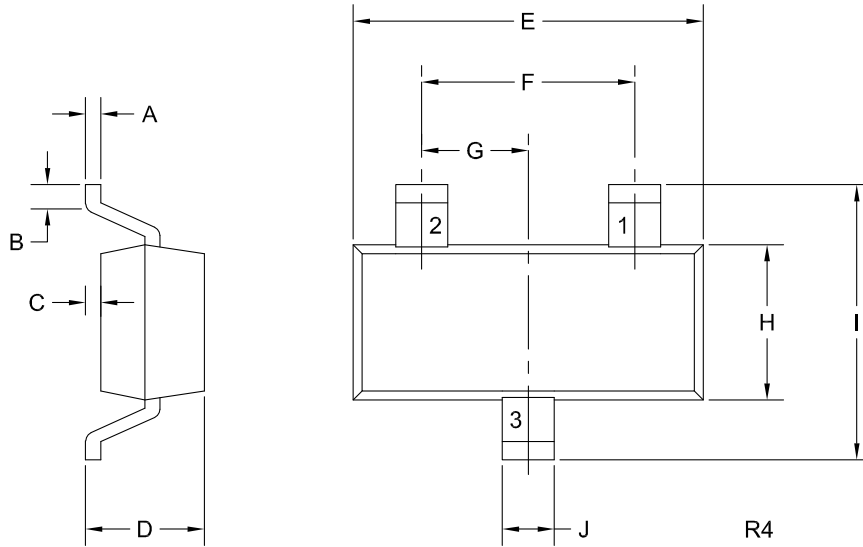
R6 (8-August 2018)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODES:

CMPT6428: C1K  
CMPT6429: C1L

| 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)

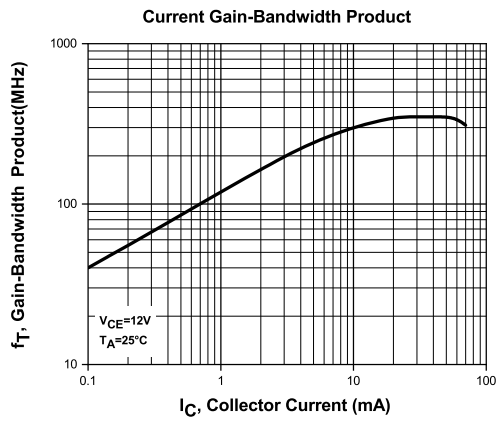
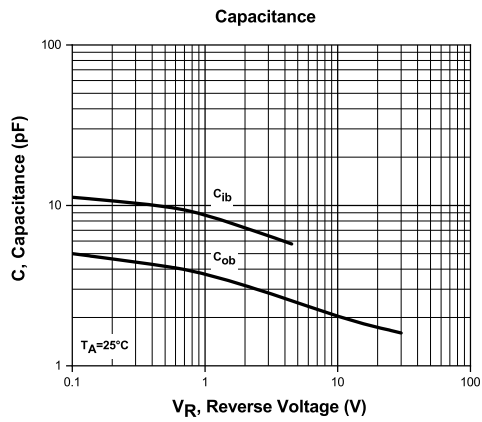
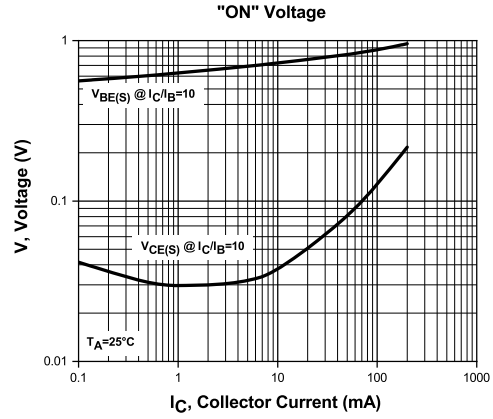
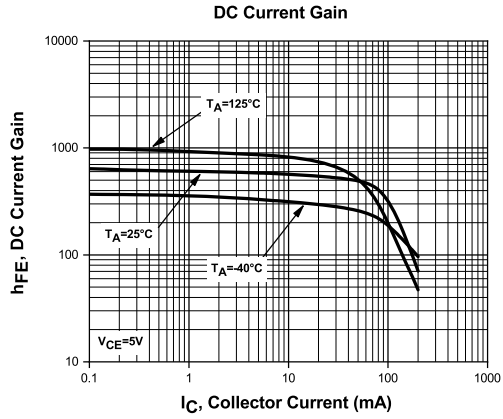
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TYPICAL ELECTRICAL CHARACTERISTICS



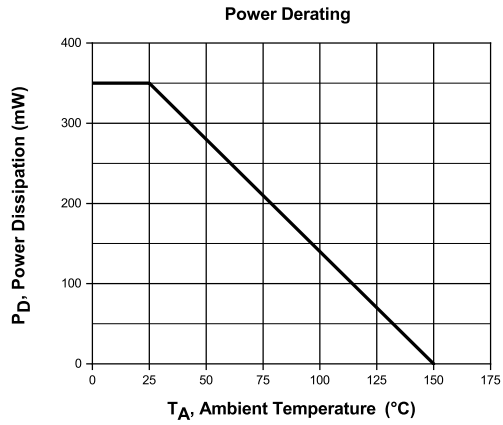
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### TYPICAL ELECTRICAL CHARACTERISTICS



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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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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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