

#### SURFACE MOUNT SILICON N-CHANNEL JFET



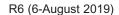
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## DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPF4416A is an epoxy molded N-Channel Silicon Junction Field Effect Transistor manufactured in an SOT-23 case, designed for VHF amplifier and mixer applications.

#### MARKING CODE: 6BG

| MAXIMUM RATINGS: (T <sub>A</sub> =25°C)                                   |  | SYMBOL                            |             | UNITS |  |  |  |
|---|--|-----------------------------------|-------------|-------|--|--|--|
| Drain-Source Voltage  |  | V <sub>DS</sub>                   | 35          | V     |  |  |  |
| Gate-Source   | Voltage  | V <sub>GS</sub>                   | 35          | V     |  |  |  |
| Gate Current  |  | ۱ <sub>G</sub>                    | 10          | mA    |  |  |  |
| Power Dissipa   | ation  | PD                                | 350         | mW    |  |  |  |
| Operating and Storage Junction Temperature                                |  | T <sub>J</sub> , T <sub>stg</sub> | -65 to +150 | °C    |  |  |  |
| Thermal Resistance  |  | Θ <sub>JA</sub>                   | 556         | °C/W  |  |  |  |
| ELECTRICAL CHARACTERISTICS: (T <sub>A</sub> =25°C unless otherwise noted) |  |                                   |             |       |  |  |  |
| SYMBOL  | TEST CONDITIONS                                    | MIN                               | MAX         | UNITS |  |  |  |
| IGSS  | V <sub>GS</sub> =20V                               |                                   | 1.0         | nA    |  |  |  |
| IDSS  | V <sub>DS</sub> =15V, V <sub>GS</sub> =0           | 5.0                               | 15          | mA    |  |  |  |
| BVGSS   | I <sub>G</sub> =1.0μΑ                              | 35                                |             | V     |  |  |  |
| V <sub>GS(off)</sub>  | V <sub>DS</sub> =15V, I <sub>D</sub> =1.0nA        | 2.5                               | 6.0         | V     |  |  |  |
| 9FS   | V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=1.0kHz | 4.5                               | 7.5         | mS    |  |  |  |
| C <sub>iss</sub>  | V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=1.0MHz |                                   | 4.5         | pF    |  |  |  |



pF

dB

1.2

2.5



V<sub>DS</sub>=15V, V<sub>GS</sub>=0, f=1.0MHz

 $V_{DS}$ =15V,  $V_{GS}$ =0, f=1.0kHz,  $R_{G}$ =1.0M $\Omega$ 

Crss

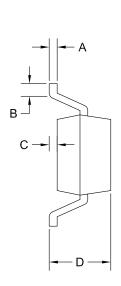
 $N_{\mathsf{F}}$ 

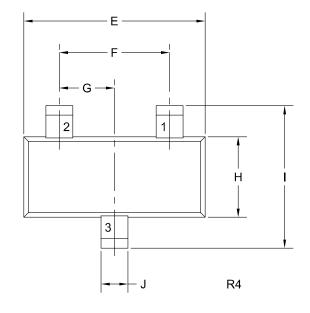




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#### SOT-23 CASE - MECHANICAL OUTLINE





LEAD CODE: 1) Drain 2) Source 3) Gate

MARKING CODE: 6BG

| DIMENSIONS        |        |       |             |      |  |  |  |
|-------------------|--------|-------|-------------|------|--|--|--|
|                   | INCHES |       | MILLIMETERS |      |  |  |  |
| SYMBOL            | MIN    | MAX   | MIN         | MAX  |  |  |  |
| А                 | 0.003  | 0.007 | 0.08        | 0.18 |  |  |  |
| В                 | 0.006  | -     | 0.15        | -    |  |  |  |
| С                 | -      | 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        |      |  |  |  |
| Н                 | 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 |  |  |  |
| COT 22 (DEV/· D/) |        |       |             |      |  |  |  |

SOT-23 (REV: R4)

R6 (6-August 2019)

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## CONTACT US

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