CMPT930

SURFACE MOUNT NPN SILICON TRANSISTOR



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT930 type is an NPN silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for small signal general purpose and switching applications.

MARKING CODE: C1X



| MAXIMUM RATINGS: (T _A =25°C) | SYMBOL | | UNITS |
|--|-----------------------------------|-------------|-------|
| Collector-Base Voltage | V_{CBO} | 45 | V |
| Collector-Emitter Voltage | V_{CEO} | 45 | V |
| Emitter-Base Voltage | V_{EBO} | 5.0 | V |
| Continuous Collector Current | IC | 30 | mA |
| Power Dissipation | P_{D} | 350 | mW |
| Operating and Storage Junction Temperature | T _J , T _{stg} | -65 to +150 | °C |
| Thermal Resistance | $\Theta_{\sf JA}$ | 357 | °C/W |

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

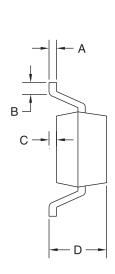
| LELOTINO TE CITATO TO CITATO TO CATALOGO CATOLOGO TO COCA) | | | | | | | |
|--|--|-----|-----|-------|--|--|--|
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS | | | |
| I _{CBO} | V _{CB} =45V | | 10 | nA | | | |
| ICEO | V _{CE} =5.0V | | 10 | nA | | | |
| ICES | V _{CE} =45V | | 10 | nA | | | |
| I _{EBO} | V _{EB} =5.0V | | 10 | nA | | | |
| BVCBO | I _C =10μA | 45 | | V | | | |
| BVCEO | I _C =10mA | 45 | | V | | | |
| BVEBO | I _E =10μA | 5.0 | | V | | | |
| VCE(SAT) | I _C =10mA, I _B =0.5mA | | 1.0 | V | | | |
| V _{BE} (SAT) | I _C =10mA, I _B =0.5mA | 0.6 | 1.0 | V | | | |
| hFE | V_{CE} =5.0V, I_{C} =10 μ A | 100 | 300 | | | | |
| hFE | V_{CE} =5.0V, I_{C} =500 μ A | 150 | | | | | |
| hFE | V_{CE} =5.0V, I_{C} =10mA | | 600 | | | | |
| f _T | V_{CE} =5.0V, I_{C} =500mA, f=30MHz | 30 | | MHz | | | |
| C_{ob} | V_{CB} =5.0V, I_E =0, f=1.0MHz | | 8.0 | pF | | | |
| NF | V_{CE} =5.0V, I_{C} =10mA, R_{S} =10k Ω , | | | | | | |
| | f=10Hz to 15.7kHz | | 3.0 | dB | | | |

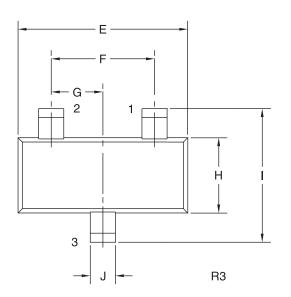
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SOT-23 CASE - MECHANICAL OUTLINE





LEAD CODE:

- 1) Base 2) Emitter 3) Collector

MARKING CODE: C1X

| DIMENSIONS | | | | | | | |
|------------|--------|-------|-------------|------|--|--|--|
| | INCHES | | MILLIMETERS | | | | |
| SYMBOL | MIN | MAX | MIN | MAX | | | |
| Α | 0.003 | 0.007 | 0.08 | 0.18 | | | |
| В | 0.006 | - | 0.15 | - | | | |
| С | - | 0.005 | - | 0.13 | | | |
| D | 0.035 | 0.043 | 0.89 | 1.09 | | | |
| 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 | | | |
| | 0.083 | 0.098 | 2.10 | 2.49 | | | |
| J | 0.014 | 0.020 | 0.35 | 0.50 | | | |

SOT-23 (REV: R3)

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 guick 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

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