

CMPT3410

**SURFACE MOUNT
LOW $V_{CE(SAT)}$
NPN SILICON TRANSISTOR**



SOT-23 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT3410 type is a NPN Low $V_{CE(SAT)}$ silicon transistor manufactured by the epitaxial planar process and epoxy molded in an SOT-23 surface mount package. This device is designed for battery driven, handheld devices requiring high current and Low $V_{CE(SAT)}$.

MARKING CODE: C341

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

| SYMBOL | | UNITS |
|----------------|-------------|--------------------|
| V_{CBO} | 40 | V |
| V_{CEO} | 25 | V |
| V_{EBO} | 6.0 | V |
| I_C | 1.0 | A |
| I_{CM} | 1.5 | A |
| 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 | MIN | TYP | MAX | UNITS |
|---------------|---|-----|-----|-----|-------|
| I_{CBO} | $V_{CB}=40\text{V}$ | | | 100 | nA |
| I_{EBO} | $V_{EB}=6.0\text{V}$ | | | 100 | nA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 40 | | | V |
| BV_{CEO} | $I_C=10\text{mA}$ | 25 | | | V |
| BV_{EBO} | $I_E=100\mu\text{A}$ | 6.0 | | | V |
| $V_{CE(SAT)}$ | $I_C=50\text{mA}, I_B=5.0\text{mA}$ | | 25 | 50 | mV |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | 40 | 75 | mV |
| $V_{CE(SAT)}$ | $I_C=200\text{mA}, I_B=20\text{mA}$ | | 80 | 150 | mV |
| $V_{CE(SAT)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$ | | 190 | 250 | mV |
| $V_{CE(SAT)}$ | $I_C=800\text{mA}, I_B=80\text{mA}$ | | 290 | 400 | mV |
| $V_{CE(SAT)}$ | $I_C=1.0\text{A}, I_B=100\text{mA}$ | | 360 | 450 | mV |
| $V_{BE(SAT)}$ | $I_C=800\text{mA}, I_B=80\text{mA}$ | | | 1.1 | V |
| $V_{BE(ON)}$ | $V_{CE}=1.0\text{V}, I_C=10\text{mA}$ | | | 0.9 | V |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=10\text{mA}$ | 100 | | | |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=100\text{mA}$ | 100 | | 300 | |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=500\text{mA}$ | 100 | | | |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=1.0\text{A}$ | 50 | | | |
| f_T | $V_{CE}=10\text{V}, I_C=50\text{mA}, f=100\text{MHz}$ | 100 | | | MHz |
| C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | 6.0 | 10 | pF |

R2 (1-August 2011)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE: C341

| 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 | 0.043 | 0.89 | 1.09 |
| 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 | 0.098 | 2.10 | 2.49 |
| J | 0.014 | 0.020 | 0.35 | 0.50 |

SOT-23 (REV: R3)

R2 (1-August 2011)

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

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