



THE DATASHEET OF CMPH10 TR



CMPTH10**SURFACE MOUNT
NPN SILICON
RF TRANSISTOR**www.centrasemi.com**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPTH10 type is an NPN silicon RF transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for low noise UHF/VHF amplifier and high output oscillator applications.

MARKING CODE: C3E**SOT-23 CASE****MAXIMUM RATINGS:** ($T_A=25^\circ\text{C}$)

| | SYMBOL | | UNITS |
|--|----------------|-------------|--------------------|
| Collector-Base Voltage | V_{CB0} | 30 | V |
| Collector-Emitter Voltage | V_{CEO} | 25 | V |
| Emitter-Base Voltage | V_{EBO} | 3.0 | V |
| Power Dissipation | P_D | 350 | mW |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | 357 | $^\circ\text{C/W}$ |

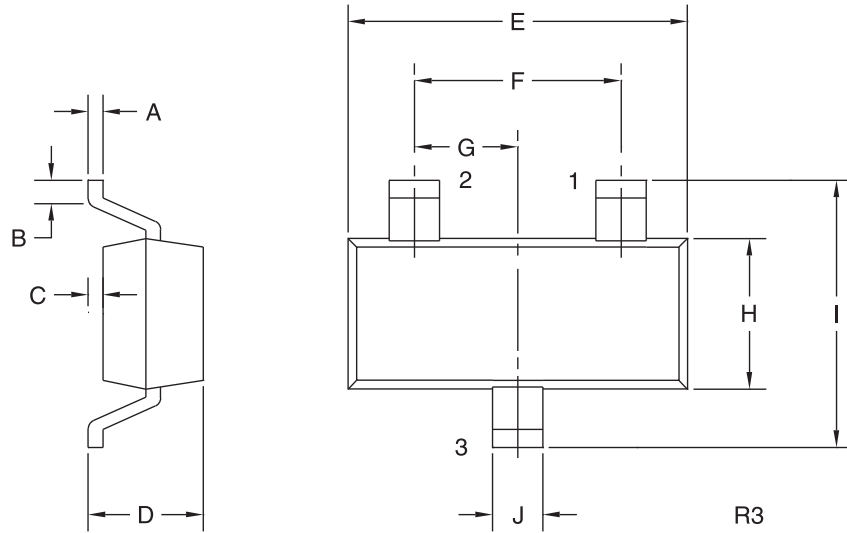
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|---|------------|------------|--------------|
| I_{CBO} | $V_{CB}=25\text{V}$ | | 100 | nA |
| I_{EBO} | $V_{EB}=2.0\text{V}$ | | 100 | nA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 30 | | V |
| BV_{CEO} | $I_C=1.0\text{mA}$ | 25 | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 3.0 | | V |
| $V_{CE(SAT)}$ | $I_C=4.0\text{mA}, I_B=0.4\text{mA}$ | | 0.50 | V |
| $V_{BE(ON)}$ | $V_{CE}=10\text{V}, I_B=4.0\text{mA}$ | | 0.95 | V |
| h_{FE} | $V_{CE}=10\text{V}, I_C=4.0\text{mA}$ | 60 | | |
| f_T | $V_{CE}=10\text{V}, I_C=4.0\text{mA}, f=100\text{MHz}$ | 650 | | MHz |
| C_{cb} | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | 0.70 | pF |
| C_{rb} | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | 0.65 | pF |
| $rb'C_c$ | $V_{CB}=10\text{V}, I_C=4.0\text{mA}, f=31.8\text{MHz}$ | | 9.0 | ps |

CMPH10
 SURFACE MOUNT
 NPN SILICON
 RF TRANSISTOR



SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE: C3E

| 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)

R5 (3-February 2010)

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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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centrasemi.com/terms



<http://www.centrasemi.com>

Product End of Life Notification

| | |
|---------------------------|----------|
| PDN ID: | PDN01112 |
| Notification Date: | 1/18/19 |
| Last Buy Date: | 7/18/19 |
| Last Shipment Date | 1/18/20 |

Summary: The CP302 RF Transistor wafer process is discontinued and is now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.



| <u>Central Part Number</u> | <u>Replacement</u> |
|----------------------------|--------------------|
| CEN1107 | N/A, Stock Only |
| CEN1107 APM | N/A, Stock Only |
| CMPH10 BK | N/A, Stock Only |
| CMPH10 TR | N/A, Stock Only |
| CP302-MPSH10-CT | N/A, Stock Only |
| CP302-MPSH10-CT20 | N/A, Stock Only |
| CP302-MPSH10-WN | N/A, Stock Only |
| MPSH10 | N/A, Stock Only |

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centrasemi.com.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View CMPTH10 TR on WIN SOURCE](#)
-  [Central Semiconductor Corp Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management