

CMLT3410 NPN



www.centralsemi.com

# DESCRIPTION:

These CENTRAL SEMICONDUCTOR dual devices are low V<sub>CE(SAT)</sub> silicon transistors in an SOT-563 surface mount package designed for small signal general purpose amplifier and switching applications requiring low collector emitter saturation voltage.

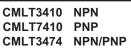
| MARKING CODES: | CMLT3410: C34 |
|----------------|---------------|
|                | CMLT7410: C74 |
|                | CMLT3474: C37 |

| MAXIMUM RATINGS: (T <sub>A</sub> =25°C)    | SYMBOL                            |             | UNITS |
|--|-----------------------------------|-------------|-------|
| Collector-Base Voltage                     | V <sub>CBO</sub>                  | 40          | V     |
| Collector-Emitter Voltage                  | VCEO                              | 25          | V     |
| Emitter-Base Voltage                       | V <sub>EBO</sub>                  | 6.0         | V     |
| Continuous Collector Current               | ۱ <sub>C</sub>                    | 1.0         | А     |
| Peak Collector Current                     | ICM                               | 1.5         | А     |
| Power Dissipation                          | PD                                | 350         | mW    |
| Operating and Storage Junction Temperature | T <sub>J</sub> , T <sub>stg</sub> | -65 to +150 | °C    |
| Thermal Resistance                         | $\Theta_{JA}$                     | 357         | °C/W  |

#### ELECTRICAL CHARACTERISTICS PER TRANSISTOR: (TA=25°C unless otherwise noted)

|                       |  |     | NPN | PNP |     |       |
|-----------------------|--|-----|-----|-----|-----|-------|
| SYMBOL                | TEST CONDITIONS  | MIN | TYP | TYP | MAX | UNITS |
| ICBO                  | V <sub>CB</sub> =40V   |     |     |     | 100 | nA    |
| IEBO                  | V <sub>EB</sub> =6.0V  |     |     |     | 100 | nA    |
| BVCBO                 | Ι <sub>C</sub> =100μΑ  | 40  |     |     |     | V     |
| BVCEO                 | I <sub>C</sub> =10mA   | 25  |     |     |     | V     |
| BVEBO                 | I <sub>E</sub> =100μA  | 6.0 |     |     |     | V     |
| V <sub>CE</sub> (SAT) | I <sub>C</sub> =50mA, I <sub>B</sub> =5.0mA                  |     | 25  | 30  | 50  | mV    |
| V <sub>CE</sub> (SAT) | I <sub>C</sub> =100mA, I <sub>B</sub> =10mA                  |     | 40  | 50  | 75  | mV    |
| V <sub>CE</sub> (SAT) | I <sub>C</sub> =200mA, I <sub>B</sub> =20mA                  |     | 80  | 95  | 150 | mV    |
| V <sub>CE</sub> (SAT) | I <sub>C</sub> =500mA, I <sub>B</sub> =50mA                  |     | 190 | 205 | 250 | mV    |
| V <sub>CE</sub> (SAT) | I <sub>C</sub> =800mA, I <sub>B</sub> =80mA                  |     | 290 | 320 | 400 | mV    |
| V <sub>CE</sub> (SAT) | I <sub>C</sub> =1.0A, I <sub>B</sub> =100mA                  |     | 360 | 400 | 450 | mV    |
| V <sub>BE(SAT)</sub>  | I <sub>C</sub> =800mA, I <sub>B</sub> =80mA                  |     |     |     | 1.1 | V     |
| V <sub>BE(ON)</sub>   | V <sub>CE</sub> =1.0V, I <sub>C</sub> =10mA                  |     |     |     | 0.9 | V     |
| h <sub>FE</sub> `´    | V <sub>CE</sub> =1.0V, I <sub>C</sub> =10mA                  | 100 |     |     |     |       |
| hFE                   | V <sub>CE</sub> =1.0V, I <sub>C</sub> =100mA                 | 100 |     |     | 300 |       |
| h <sub>FE</sub>       | V <sub>CE</sub> =1.0V, I <sub>C</sub> =500mA                 | 100 |     |     |     |       |
| h <sub>FE</sub>       | V <sub>CE</sub> =1.0V, I <sub>C</sub> =1.0A                  | 50  |     |     |     |       |
| fT                    | V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=100MHz         | 100 |     |     |     | MHz   |
| Cob                   | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz (CMLT3410) |     | 6.0 |     | 10  | pF    |
| C <sub>ob</sub>       | $V_{CB}$ =10V, I <sub>E</sub> =0, f=1.0MHz (CMLT7410)        |     |     | 10  | 15  | pF    |

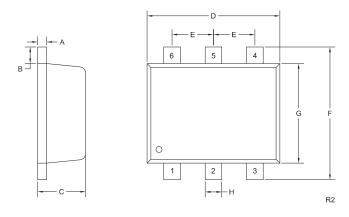
R5 (29-June 2015)





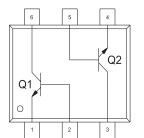
SURFACE MOUNT SILICON DUAL, LOW V<sub>CE</sub>(SAT) TRANSISTORS

## SOT-563 CASE - MECHANICAL OUTLINE

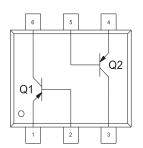


| DIMENSIONS |        |       |             |          |
|------------|--------|-------|-------------|----------|
|            | INCHES |       | MILLIMETERS |          |
| SYMBOL     | MIN    | MAX   | MIN         | MAX      |
| A          | 0.0027 | 0.007 | 0.07        | 0.18     |
| В          | 0.008  |       | 0.20        |          |
| С          | 0.017  | 0.024 | 0.45        | 0.60     |
| D          | 0.059  | 0.067 | 1.50        | 1.70     |
| E          | 0.020  |       | 0.50        |          |
| F          | 0.059  | 0.067 | 1.50        | 1.70     |
| G          | 0.043  | 0.051 | 1.10        | 1.30     |
| Н          | 0.006  | 0.012 | 0.15        | 0.30     |
|            |        | SC    | DT-563 (F   | REV: R2) |

#### **PIN CONFIGURATIONS**



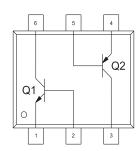
MARKING CODE: CMLT3410: C34



MARKING CODE: CMLT7410: C74

## LEAD CODE:

- 1) Emitter Q1
  2) Base Q1
  3) Collector Q2
  4) Emitter Q2
- 5) Base Q2
- 6) Collector Q1



MARKING CODE: CMLT3474: C37

R5 (29-June 2015)

www.centralsemi.com

# 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

### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free guick 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

· Custom product packing

Custom bar coding for shipments

- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- · Application and design sample kits
- · Custom product and package development

## REQUESTING PRODUCT PLATING

- If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when 1. 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

## **Corporate Headquarters & Customer Support Team**

Central Semiconductor Corp. 145 Adams Avenue Hauppauge, NY 11788 USA Main Tel: (631) 435-1110 Main Fax: (631) 435-1824 Support Team Fax: (631) 435-3388 www.centralsemi.com

Worldwide Field Representatives: www.centralsemi.com/wwreps

Worldwide Distributors: www.centralsemi.com/wwdistributors

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.centralsemi.com/terms





Product End of Life Notification

| PDN ID:            | PDN01237 |
|--------------------|----------|
| Notification Date: | 7/27/22  |
| Last Buy Date:     |          |
| Last Shipment Date | 7/27/23  |

Summary: The following items are discontinued and now considered 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 Portfolio Management. 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.

## \* All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.

| Central Part Number | Suggested Replacement |
|---------------------|-----------------------|
| BCW31 BK            | N/A                   |
| BCW31 TR            | N/A                   |
| CMLT3474 BK         | N/A                   |
| CMLT3474 TR         | N/A                   |
| CMUD2836 BK         | N/A                   |
| CMUD2836 TR         | N/A                   |
| CMZ2361 BK          | N/A                   |
| CMZ2361 TR          | N/A                   |
| CXDM3069N BK        | N/A                   |
| CXDM3069N TR        | N/A                   |

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. If you would like assistance, please visit https://my.centralsemi.com/submit-inquiry?type=ER to submit an online inquiry.

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.