

CMLT3410 NPN  
 CMLT7410 PNP  
 CMLT3474 NPN/PNP

**SURFACE MOUNT  
 DUAL LOW  $V_{CE(SAT)}$   
 SILICON TRANSISTORS**

**PICOmini™**



**SOT-563 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

These CENTRAL SEMICONDUCTOR dual devices are low  $V_{CE(SAT)}$  silicon transistors in a PICOmini™ 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:** ( $T_A=25^\circ\text{C}$ )

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**

$V_{CBO}$  40  
 $V_{CEO}$  25  
 $V_{EBO}$  6.0  
 $I_C$  1.0  
 $I_{CM}$  1.5  
 $P_D$  350  
 $T_J, T_{stg}$  -65 to +150  
 $\Theta_{JA}$  357

**UNITS**

V  
 V  
 V  
 A  
 A  
 mW  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

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

| SYMBOL        | TEST CONDITIONS  | TYP |     |     | MAX | UNITS |
|---------------|--|-----|-----|-----|-----|-------|
|               |  | MIN | NPN | PNP |     |       |
| $I_{CBO}$     | $V_{CB}=40\text{V}$                                    |     |     |     | 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     |
| $V_{CE(SAT)}$ | $I_C=50\text{mA}, I_B=5.0\text{mA}$                    |     | 20  | 25  | 50  | mV    |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$                    |     | 35  | 40  | 75  | mV    |
| $V_{CE(SAT)}$ | $I_C=200\text{mA}, I_B=20\text{mA}$                    |     | 75  | 80  | 150 | mV    |
| $V_{CE(SAT)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$                    |     | 130 | 150 | 250 | mV    |
| $V_{CE(SAT)}$ | $I_C=800\text{mA}, I_B=80\text{mA}$                    |     | 200 | 220 | 400 | mV    |
| $V_{CE(SAT)}$ | $I_C=1.0\text{A}, I_B=100\text{mA}$                    |     | 250 | 275 | 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   |
| $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ (CMLT3410) |     |     |     | 10  | pF    |
| $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ (CMLT7410) |     |     |     | 15  | pF    |

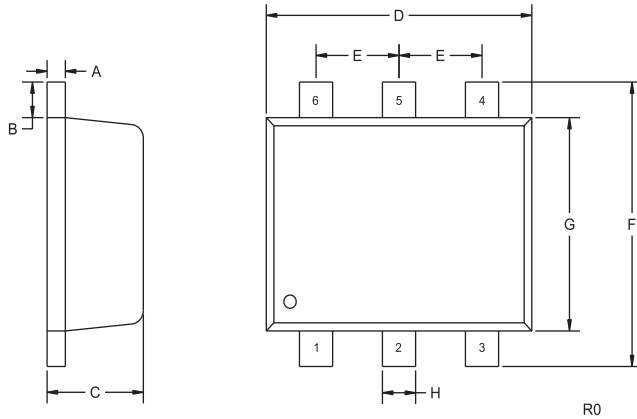
R2 (20-January 2010)

CMLT3410 NPN  
 CMLT7410 PNP  
 CMLT3474 NPN/PNP



**SURFACE MOUNT  
 DUAL LOW  $V_{CE(SAT)}$   
 SILICON TRANSISTORS**

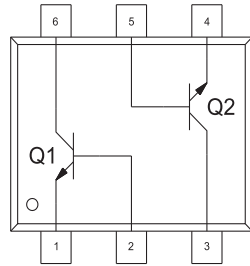
**SOT-563 CASE - MECHANICAL OUTLINE**



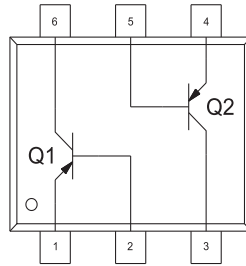
| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.004      | 0.007 | 0.10        | 0.18 |
| B      | 0.008      |       | 0.20        |      |
| C      | 0.022      | 0.024 | 0.56        | 0.60 |
| D      | 0.059      | 0.067 | 1.50        | 1.70 |
| E      | 0.020      |       | 0.50        |      |
| F      | 0.061      | 0.067 | 1.55        | 1.70 |
| G      | 0.047      |       | 1.20        |      |
| H      | 0.006      | 0.012 | 0.15        | 0.30 |

SOT-563 (REV: R0)

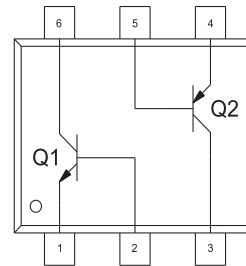
**PIN CONFIGURATIONS**



**MARKING CODE:**  
**CMLT3410: C34**



**MARKING CODE:**  
**CMLT7410: C74**



**MARKING CODE:**  
**CMLT3474: C37**

- LEAD CODE:**
- 1) Emitter Q1
  - 2) Base Q1
  - 3) Collector Q2
  - 4) Emitter Q2
  - 5) Base Q2
  - 6) Collector Q1

R2 (20-January 2010)