

CMLT3410 NPN
 CMLT7410 PNP
 CMLT3474 NPN/PNP

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

PICOmini™



SOT-563 CASE

Central™

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLT3410 (Dual NPN), CMLT7410 (Dual PNP), and CMLT3474 (Complementary NPN & PNP), 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	NPN:	C34
CMLT7410	PNP:	C74
CMLT3474	NPN/PNP:	C37

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

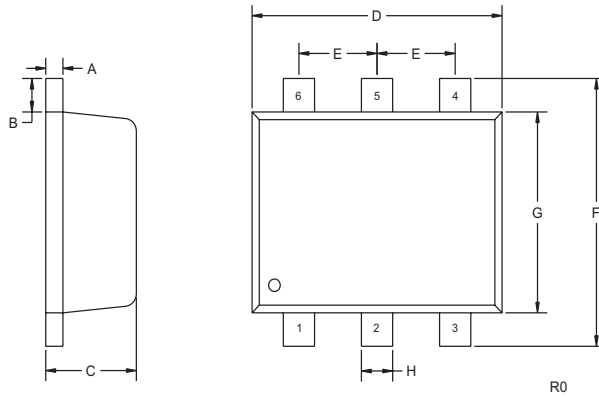
	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	1.0	A
Collector Current (Peak)	I_{CM}	1.5	A
Power Dissipation	P_D	350	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	357	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	TYP			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

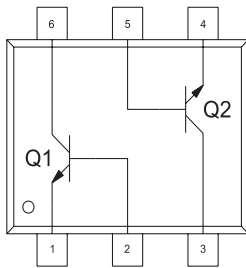
R0 (28-March 2005)

SOT-563 CASE - MECHANICAL OUTLINE

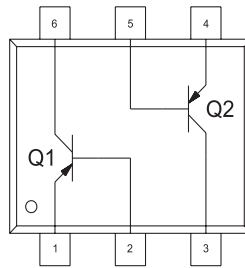


SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.007	0.10	0.18
B	0.008		0.20	
C	0.022	0.024	0.56	0.60
D	0.059	0.067	1.50	1.70
E	0.020		0.50	
F	0.061	0.067	1.55	1.70
G	0.047		1.20	
H	0.006	0.012	0.15	0.30

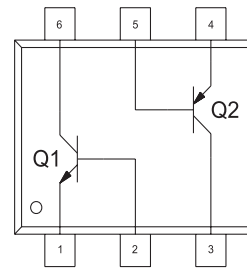
SOT-563 (REV: R0)



CMLT3410
MARKING CODE: C34



CMLT7410
MARKING CODE: C74



CMLT3474
MARKING CODE: C37

LEAD CODE:

- 1) EMITTER Q1
- 2) BASE Q1
- 3) COLLECTOR Q2
- 4) EMITTER Q2
- 5) BASE Q2
- 6) COLLECTOR Q1