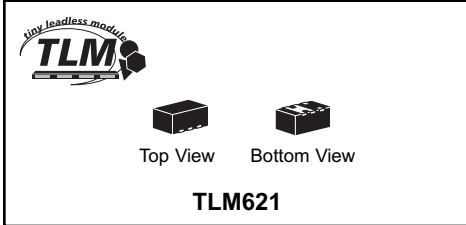




CTLT3410-M621 (NPN)
CTLT7410-M621 (PNP)

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



Central™ Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLT3410-M621 and CTLT7410-M621 are Low $V_{CE(SAT)}$ transistors in a very small leadless 1x2mm surface mount package, designed for applications where small size, operational efficiency, and low energy consumption are prime requirements. Due to the leadless package design, these devices are capable of dissipating up to 3 times the power of similar devices in comparable sized surface mount packages.

CTLT3410-M621 MARKING CODE: CB
CTLT7410-M621 MARKING CODE: CD

FEATURES:

- High Operational Efficiency
- High Power to Footprint Ratio
- $V_{CE(SAT)}$ @ 1.0A = 250mV (TYP)
- High Collector Current
- Small TLM621 1x2mm Package

APPLICATIONS:

- DC/DC Converters
- Switching Circuits
- LCD Backlighting
- Battery Powered Portable Equipment

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

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Collector Current
Collector Current (Peak)
Power Dissipation (See Note 1)
Operating and Storage Junction Temperature
Thermal Resistance (See Note 1)

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	0.9	W
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
θ_{JA}	139	$^\circ\text{C/W}$

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

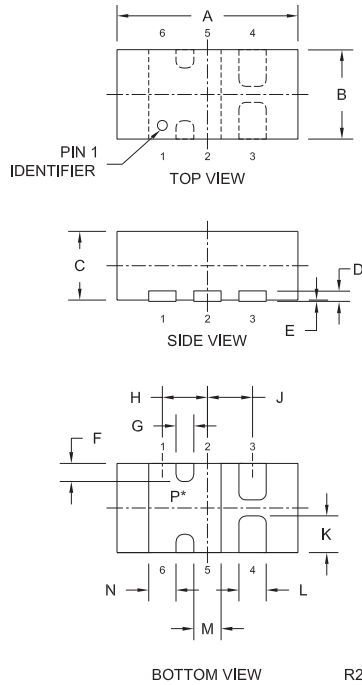
SYMBOL	TEST CONDITIONS	MIN	PNP	TYP	NPN	MAX	UNITS
I_{CBO}	$V_{CB}=40\text{V}$					100	nA
I_{EBO}	$V_{EB}=6.0\text{V}$					100	nA
BV_{CBO}	$I_C=100\mu\text{A}$	40					V
BV_{CEO}	$I_C=10\text{mA}$	25					V
BV_{EBO}	$I_E=100\mu\text{A}$	6.0					V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$.02		.025	.05	V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$.035		.04	.075	V
$V_{CE(SAT)}$	$I_C=200\text{mA}, I_B=20\text{mA}$.075		.08	0.15	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.13		0.15	0.25	V
$V_{CE(SAT)}$	$I_C=800\text{mA}, I_B=80\text{mA}$		0.2		0.22	0.4	V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		0.25		0.275	0.45	V
$V_{BE(SAT)}$	$I_C=800\text{mA}, I_B=80\text{mA}$					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}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ (NPN)					10	pF
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ (PNP)					15	pF

Note 1: FR-4 Epoxy PCB with copper mounting pad area of 33mm²

R0 (14-January 2008)

**SURFACE MOUNT
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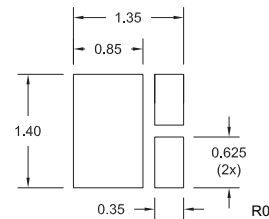
TLM621 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.073	0.085	1.850	2.150
B	0.033	0.045	0.850	1.150
C	0.028	0.031	0.700	0.800
D	0.006		0.150	
E	0.000	0.002	0.000	0.050
F	0.008		0.200	
G	0.010		0.250	
H	0.020		0.500	
J	0.020		0.500	
K	0.012	0.020	0.300	0.500
L	0.007	0.012	0.180	0.300
M	0.007	0.012	0.180	0.300
N	0.007	0.012	0.180	0.300

TLM621 (REV: R2)

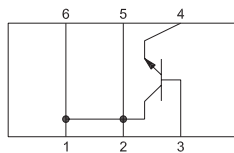
**SUGGESTED MOUNTING PADS
(Dimensions in mm)**



* Exposed pad P connects pins 1, 2, 5, and 6

PIN CONFIGURATION

CTLT3410-M621

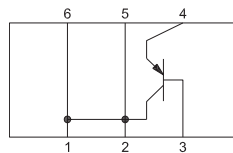


LEAD CODE:

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

MARKING CODE: CB

CTLT7410-M621



LEAD CODE:

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

MARKING CODE: CD

R0 (14-January 2008)