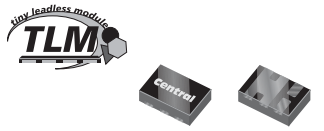
CTLT3410-M621 (NPN)
CTLT7410-M621 (PNP)

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



Top View Bottom View

TLM621 CASE

Central Semiconductor Corp.

www.centralsemi.com

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.

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

APPLICATIONS:

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

FEATURES:

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

MAXIMUM RATINGS: (T_A=25°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
Continuous Collector Current	I_C	1.0	A
Peak Collector Current	I_{CM}	1.5	A
Power Dissipation (Note 1)	P_D	0.9	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance (Note 1)	Θ_{JA}	139	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

			NPN	PNP		
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**TYP**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=40V				100	nA
I_{EBO}	V_{EB}=6.0V				100	nA
BV_{CBO}	I_C=100μA	40				V
BV_{CEO}	I_C=10mA	25				V
BV_{EBO}	I_E=100μA	6.0				V
$V_{CE(SAT)}$	I_C=50mA, I_B=5.0mA		25	30	50	mV
$V_{CE(SAT)}$	I_C=100mA, I_B=10mA		40	50	75	mV
$V_{CE(SAT)}$	I_C=200mA, I_B=20mA		80	95	150	mV
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA		190	205	250	mV
$V_{CE(SAT)}$	I_C=800mA, I_B=80mA		290	320	400	mV
$V_{CE(SAT)}$	I_C=1.0A, I_B=100mA		360	400	450	mV

Notes (1) FR-4 Epoxy PCB with copper mounting pad area of $33mm^2$

R3 (1-August 2011)

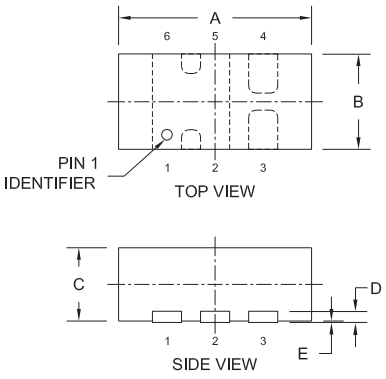
CTLT3410-M621 (NPN)
CTLT7410-M621 (PNP)

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

ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	NPN TYP	PNP TYP	MAX	UNITS
$V_{BE(SAT)}$	I_C=800mA, I_B=80mA				1.1	V
$V_{BE(ON)}$	V_{CE}=1.0V, I_C=10mA				0.9	V
h_{FE}	V_{CE}=1.0V, I_C=10mA	100				
h_{FE}	V_{CE}=1.0V, I_C=100mA	100			300	
h_{FE}	V_{CE}=1.0V, I_C=500mA	100				
h_{FE}	V_{CE}=1.0V, I_C=1.0A	50				
f_T	V_{CE}=10V, I_C=50mA, f=100MHz	100				MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz (CMLT3410-M621)		6.0		10	pF
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz (CMLT7410-M621)			10	15	pF

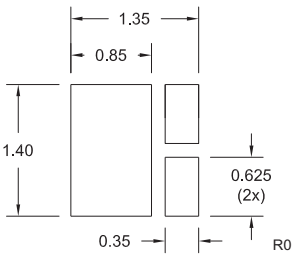
TLM621 CASE - MECHANICAL OUTLINE

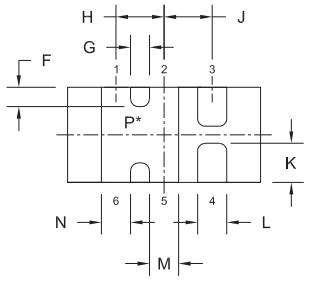


DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.073	0.085	1.850	2.150
B	0.033	0.045	0.850	1.150
C	0.028	0.031	0.700	0.800
D	0.006		0.150	
E	0.000	0.002	0.000	0.050
F	0.008		0.200	
G	0.010		0.250	
H	0.020		0.500	
J	0.020		0.500	
K	0.012	0.020	0.300	0.500
L	0.007	0.012	0.180	0.300
M	0.007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

TLM621 (REV: R2)

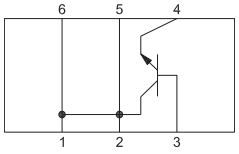
SUGGESTED MOUNTING PADS
(Dimensions in mm)



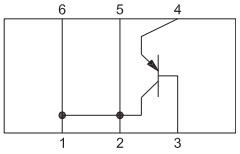


* Exposed pad P connects pins 1, 2, 5, and 6.

PIN CONFIGURATIONS



CTLT3410-M621



CTLT7410-M621

LEAD CODES:
1) Collector
2) Collector
3) Base
4) Emitter
5) Collector
6) Collector

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

R3 (1-August 2011)

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

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