

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

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



Top View Bottom View

TLM621 CASE



www.centrasemi.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

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
Continuous Collector Current
Peak Collector Current
Power Dissipation (Note 1)
Operating and Storage Junction Temperature
Thermal Resistance (Note 1)

SYMBOL

V_{CBO} 40
 V_{CEO} 25
 V_{EBO} 6.0
 I_C 1.0
 I_{CM} 1.5
 P_D 0.9
 T_J, T_{stg} -65 to +150
 θ_{JA} 139

UNITS

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

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

SYMBOL	TEST CONDITIONS	MIN	NPN TYP	PNP TYP	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
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		25	30	50	mV
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		40	50	75	mV
$V_{CE(SAT)}$	$I_C=200\text{mA}, I_B=20\text{mA}$		80	95	150	mV
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		190	205	250	mV
$V_{CE(SAT)}$	$I_C=800\text{mA}, I_B=80\text{mA}$		290	320	400	mV
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		360	400	450	mV

Notes (1) FR-4 Epoxy PCB with copper mounting pad area of 33mm²

R3 (1-August 2011)

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

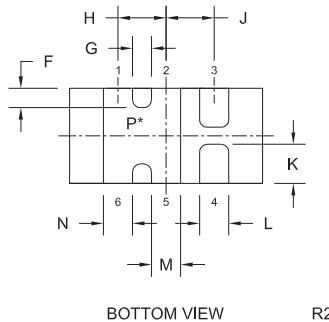
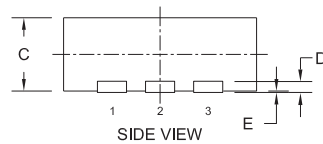
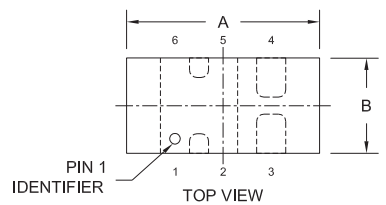
SURFACE MOUNT
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	NPN TYP	PNP TYP	MAX	UNITS
$V_{BE(SAT)}$	$I_C=800\text{mA}$, $I_B=80\text{mA}$				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-M621)		6.0		10	pF
C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$ (CMLT7410-M621)			10	15	pF

TLM621 CASE - MECHANICAL OUTLINE

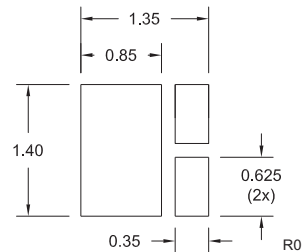


* Exposed pad P connects pins 1, 2, 5, and 6.

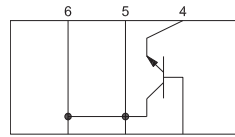
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.073	0.085	1.850	2.150
B	0.033	0.045	0.850	1.150
C	0.028	0.031	0.700	0.800
D	0.006		0.150	
E	0.000	0.002	0.000	0.050
F	0.008		0.200	
G	0.010		0.250	
H	0.020		0.500	
J	0.020		0.500	
K	0.012	0.020	0.300	0.500
L	0.007	0.012	0.180	0.300
M	0.007	0.012	0.180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

TLM621 (REV: R2)

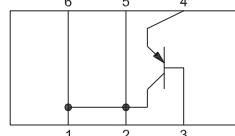
SUGGESTED MOUNTING PADS (Dimensions in mm)



PIN CONFIGURATIONS



CTLT3410-M621



CTLT7410-M621

LEAD CODES:

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

MARKING CODES:

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R3 (1-August 2011)

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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

REQUESTING PRODUCT PLATING

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

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Product End of Life Notification

PDN ID:	PDN01096
Notification Date:	8/07/18
Last Buy Date:	2/07/19
Last Shipment Date	8/07/19

Summary: All devices in the TLM621 and TLM621H packages are discontinued and now classified as 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 Management Process. 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.

<u>Central Part Number</u>	<u>Replacement</u>
CTLDM7002A-M621 BK	N/A, Stock Only
CTLDM7002A-M621 TR	N/A, Stock Only
CTLDM7003-M621 BK	N/A, Stock Only
CTLDM7003-M621 TR	N/A, Stock Only
CTLDM7120-M621H BK	N/A, Stock Only
CTLDM7120-M621H TR	N/A, Stock Only
CTLDM8002A-M621 BK	N/A, Stock Only
CTLDM8002A-M621 TR	N/A, Stock Only
CTLDM8002A-M621H BK	N/A, Stock Only
CTLDM8002A-M621H TR	N/A, Stock Only
CTLDM8120-M621H BK	N/A, Stock Only
CTLDM8120-M621H TR	N/A, Stock Only
CTLSH05-40M621 BK	N/A, Stock Only
CTLSH05-40M621 TR	N/A, Stock Only
CTLSH1-40M621H BK	N/A, Stock Only
CTLSH1-40M621H TR	N/A, Stock Only
CTLT3410-M621 BK	N/A, Stock Only
CTLT3410-M621 TR	N/A, Stock Only
CTLT7410-M621 TR	N/A, Stock Only

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. Please email your requests to engineering@centralsemi.com.

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.