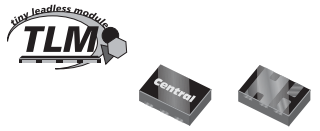
CTLDM7003-M621

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



Top View Bottom View

TLM621 CASE

• Device is ***Halogen Free*** by design

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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLDM7003-M621 is a Silicon N-Channel Enhancement-mode MOSFET in a small, thermally efficient, TLM™ 2x1mm package.

MARKING CODE: CS

APPLICATIONS:

- Load/Power Switches
- Power Supply Converter Circuits
- Battery Powered Portable Equipment

FEATURES:

- ESD Protection up to 2kV
- Low $r_{DS(ON)}$
- Low Threshold Voltage
- Fast Switching
- Logic Level Compatible
- Small TLM™ 2x1mm Package

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	50	V
Drain-Gate Voltage	V_{DG}	50	V
Gate-Source Voltage	V_{GS}	12	V
Continuous Drain Current	I_D	280	mA
Maximum Pulsed Drain Current	I_{DM}	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	Θ_{JA}	139	°C/W

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=5.0V			100	nA
I_{GSSF}, I_{GSSR}	V_{GS}=10V			2.0	μA
I_{GSSF}, I_{GSSR}	V_{GS}=12V			2.0	μA
I_{DSS}	V_{DS}=50V, V_{GS}=0			50	nA
BV_{DSS}	V_{GS}=0, I_D=10μA	50			V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.49		1.0	V
V_{SD}	V_{GS}=0, I_S=115mA			1.4	V
$r_{DS(ON)}$	V_{GS}=1.8V, I_D=50mA		1.6	3.0	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=50mA		1.3	2.5	Ω
$r_{DS(ON)}$	V_{GS}=5.0V, I_D=50mA		1.1	2.0	Ω
g_{FS}	V_{DS}=10V, I_D=200mA	200			mS
C_{rss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz			5.0	pF
C_{iss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz			50	pF
C_{oss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz			25	pF

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

R1 (17-February 2010)

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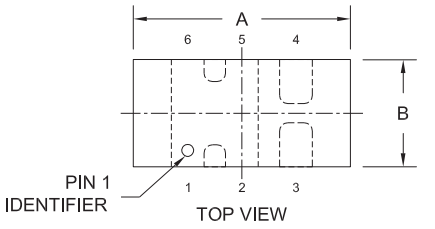
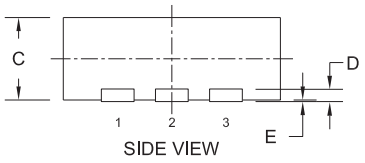
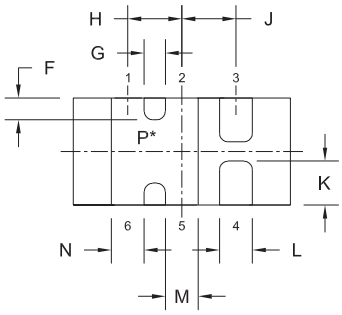
TLM621 CASE - MECHANICAL OUTLINE







BOTTOM VIEW R2

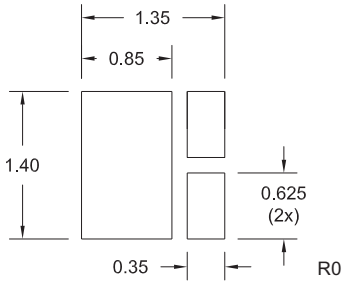
*Exposed pad P connects pins 1, 2, 5, and 6.

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

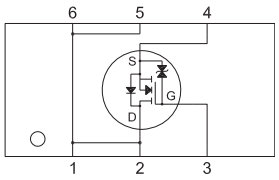
TLM621 (REV: R2)

SUGGESTED MOUNTING PADS

(Dimensions in mm)



PIN CONFIGURATION



LEAD CODE:
1) Drain
2) Drain
3) Gate
4) Source
5) Drain
6) Drain

MARKING CODE: CS

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