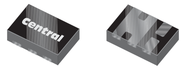
CTLDM7002A-M621

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



Top View Bottom View

TLM621 CASE

- Device is ***Halogen Free*** by design

APPLICATIONS:

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

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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLDM7002A-M621 is a Silicon N-Channel Enhancement-mode MOSFET in a small, thermally efficient, TLM™ 2x1mm package.

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FEATURES:

- Low $r_{DS(ON)}$
- Low $V_{DS(ON)}$
- 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}	60	V
Drain-Gate Voltage	V_{DG}	60	V
Gate-Source Voltage	V_{GS}	40	V
Continuous Drain Current	I_D	280	mA
Continuous Source Current (Body Diode)	I_S	280	mA
Maximum Pulsed Drain Current	I_{DM}	1.5	A
Maximum Pulsed Source Current	I_{SM}	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)

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=20V, V_{DS}=0		100	nA
I_{DSS}	V_{DS}=60V, V_{GS}=0		1.0	μA
I_{DSS}	V_{DS}=60V, V_{GS}=0, T_J=125°C		500	μA
$I_{D(ON)}$	V_{GS}=10V, V_{DS}=10V	500		mA
BV_{DSS}	V_{GS}=0, I_D=10μA	60		V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	1.0	2.5	V
$V_{DS(ON)}$	V_{GS}=10V, I_D=500mA		1.0	V
$V_{DS(ON)}$	V_{GS}=5.0V, I_D=50mA		0.15	V
V_{SD}	V_{GS}=0, I_S=400mA		1.2	V

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

R2 (17-February 2010)

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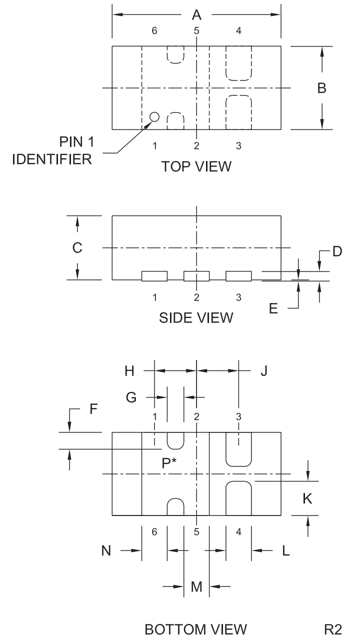
ELECTRICAL CHARACTERISTICS - Continued: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$r_{DS(ON)}$	V_{GS}=10V, I_D=500mA		2.0	Ω
$r_{DS(ON)}$	V_{GS}=10V, I_D=500mA, T_J=125°C		3.5	Ω
$r_{DS(ON)}$	V_{GS}=5.0V, I_D=50mA		3.0	Ω
$r_{DS(ON)}$	V_{GS}=5.0V, I_D=50mA, T_J=125°C		5.0	Ω
g_{FS}	V_{DS}=10V, I_D=200mA	80		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		15	pF
t_{on}, t_{off}	V_{DD}=30V, V_{GS}=10V, I_D=200mA, R_G=25Ω, R_L=150Ω		20	ns

TLM621 CASE - MECHANICAL OUTLINE



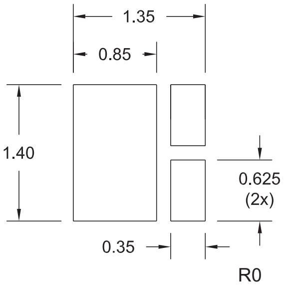
*Exposed pad P connects pins 1, 2, 5, and 6

SYMBOL	INCHES MIN	INCHES MAX	MILLIMETERS MIN	MILLIMETERS 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

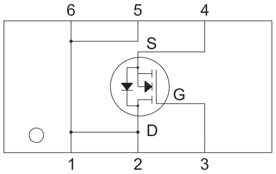
TLM621 (REV: R2)

SUGGESTED MOUNTING PADS

(Dimensions in mm)



PIN CONFIGURATION



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

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