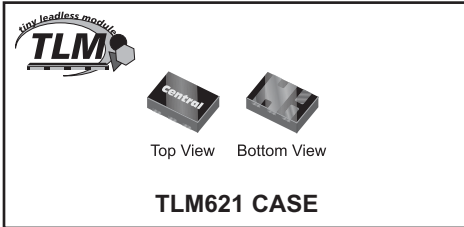


CTLDM7002A-M621

**SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET**



TLM621 CASE

- Device is **Halogen Free** by design

APPLICATIONS:

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

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

Drain-Source Voltage
Drain-Gate Voltage
Gate-Source Voltage
Continuous Drain Current
Continuous Source Current (Body Diode)
Maximum Pulsed Drain Current
Maximum Pulsed Source Current
Power Dissipation (Note 1)
Operating and Storage Junction Temperature
Thermal Resistance (Note 1)



www.centrasemi.com

DESCRIPTION:

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

MARKING CODE: CP

FEATURES:

- Low $r_{DS(ON)}$
- Low $V_{DS(ON)}$
- Low Threshold Voltage
- Fast Switching
- Logic Level Compatible
- Small TLM™ 2x1mm Package

SYMBOL		UNITS
V_{DS}	60	V
V_{DG}	60	V
V_{GS}	40	V
I_D	280	mA
I_S	280	mA
I_{DM}	1.5	A
I_{SM}	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	MAX	UNITS
I_{GSSF}, I_{GSSR}	$V_{GS}=20\text{V}, V_{DS}=0$		100	nA
I_{DSS}	$V_{DS}=60\text{V}, V_{GS}=0$		1.0	μA
I_{DSS}	$V_{DS}=60\text{V}, V_{GS}=0, T_J=125^\circ\text{C}$		500	μA
$I_{D(ON)}$	$V_{GS}=10\text{V}, V_{DS}=10\text{V}$	500		mA
BV_{DSS}	$V_{GS}=0, I_D=10\mu\text{A}$	60		V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1.0	2.5	V
$V_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=500\text{mA}$		1.0	V
$V_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=50\text{mA}$		0.15	V
V_{SD}	$V_{GS}=0, I_S=400\text{mA}$		1.2	V

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

R2 (17-February 2010)

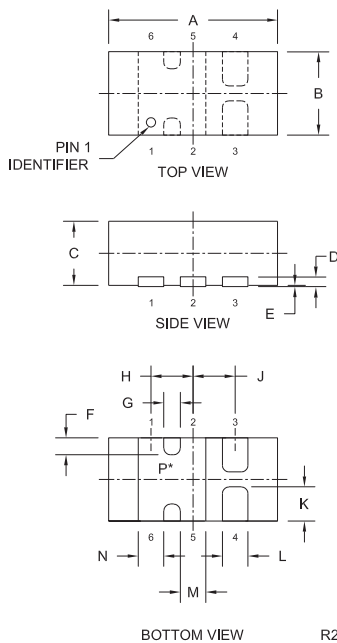
CTLDM7002A-M621
SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$r_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=500\text{mA}$		2.0	Ω
$r_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=500\text{mA}, T_J=125^\circ\text{C}$		3.5	Ω
$r_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=50\text{mA}$		3.0	Ω
$r_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=50\text{mA}, T_J=125^\circ\text{C}$		5.0	Ω
g_{FS}	$V_{DS}=10\text{V}, I_D=200\text{mA}$	80		mS
C_{rss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		5.0	pF
C_{iss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		50	pF
C_{oss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		15	pF
t_{on}, t_{off}	$V_{DD}=30\text{V}, V_{GS}=10\text{V}, I_D=200\text{mA},$ $R_G=25\Omega, R_L=150\Omega$		20	ns

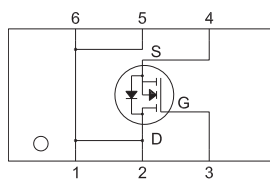
TLM621 CASE - MECHANICAL OUTLINE



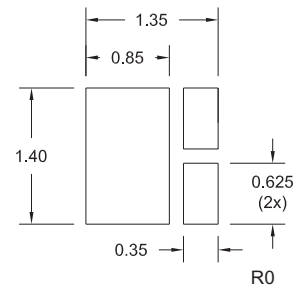
SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.073	0.085	1.850	2.150
B	0.033	0.045	0.850	1.150
C	0.028	0.031	0.700	0.800
D	0.006		0.150	
E	0.000	0.002	0.000	0.050
F	0.008		0.200	
G	0.010		0.250	
H	0.020		0.500	
J	0.020		0.500	
K	0.012	0.020	0.300	0.500
L	0.007	0.012	0.180	0.300
M	0.007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

TLM621 (REV: R2)

PIN CONFIGURATION



SUGGESTED MOUNTING PADS
(Dimensions in mm)



LEAD CODE:

- 1) Drain
- 2) Drain
- 3) Gate
- 4) Source
- 5) Drain
- 6) Drain

MARKING CODE: CP

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

R2 (17-February 2010)