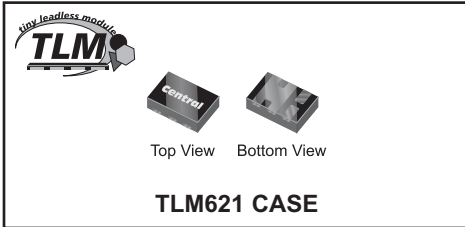


CTLDM8002A-M621

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



www.centrasemi.com



APPLICATIONS:

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

MAXIMUM RATINGS: (T_A=25°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)

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLDM8002A-M621 is a Silicon P-Channel Enhancement-mode MOSFET in a small, thermally efficient, TLM™ 2x1mm package.

MARKING CODE: CN

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}	50	V
V _{DG}	50	V
V _{GS}	20	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	°C
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} =50V, V _{GS} =0		1.0	μA
I _{DSS}	V _{DS} =50V, 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	50		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		1.5	V
V _{DS(ON)}	V _{GS} =5.0V, I _D =50mA		0.15	V
V _{SD}	V _{GS} =0, I _S =115mA		1.3	V
r _{DS(ON)}	V _{GS} =10V, I _D =500mA		2.5	Ω
r _{DS(ON)}	V _{GS} =10V, I _D =500mA, T _J =125°C		4.0	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	200		mS

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

R1 (17-February 2010)

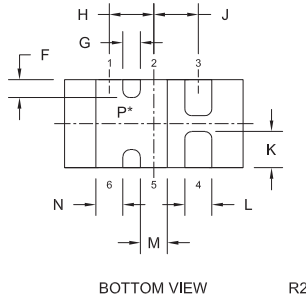
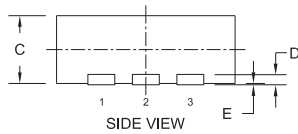
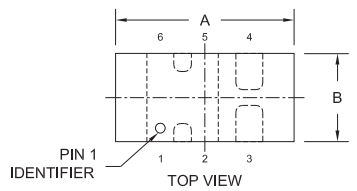
CTLDM8002A-M621
SURFACE MOUNT
P-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



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

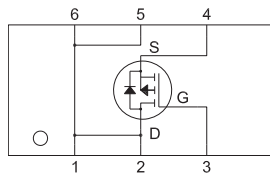
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
C_{rss}	$V_{DS}=25\text{V}$, $V_{GS}=0$, $f=1.0\text{MHz}$		7.0	pF
C_{iss}	$V_{DS}=25\text{V}$, $V_{GS}=0$, $f=1.0\text{MHz}$		70	pF
C_{oss}	$V_{DS}=25\text{V}$, $V_{GS}=0$, $f=1.0\text{MHz}$		15	pF
t_{on} , t_{off}	$V_{DD}=30\text{V}$, $V_{GS}=10\text{V}$, $I_D=200\text{mA}$, $R_G=25\Omega$, $R_L=150\Omega$		20	ns

TLM621 CASE - MECHANICAL OUTLINE



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

PIN CONFIGURATION

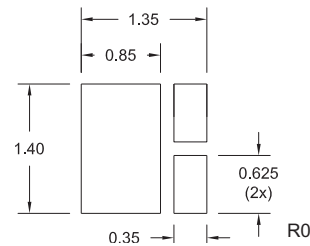


SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.073	0.085	1.850	2.150
B	0.033	0.045	0.850	1.150
C	0.028	0.031	0.700	0.800
D	0.006		0.150	
E	0.000	0.002	0.000	0.050
F	0.008		0.200	
G	0.010		0.250	
H	0.020		0.500	
J	0.020		0.500	
K	0.012	0.020	0.300	0.500
L	0.007	0.012	0.180	0.300
M	0.007	0.012	0.180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

TLM621 (REV: R2)

SUGGESTED MOUNTING PADS

(Dimensions in mm)



LEAD CODE:

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

MARKING CODE: CN

R1 (17-February 2010)