

Small Signal Enhancement-mode MOSFETs

Central Semiconductor manufactures N-Channel and P-Channel small signal Enhancement-mode MOSFETs packaged in the most popular tiny surface mount packages designed for high speed pulsed amplifier and driver applications for a broad range of end products including: Cellphones, SMARTphones, PDAs, MP3 players, GPS navigation, digital cameras, modems, and set top boxes. Additional information is available at www.centrasemi.com



Family	BV _{DSS} (V) MIN	I _D (A)	r _{DS(ON)} (Ω) MAX	@ I _D (A)	@ V _{GS} (V)	V _{GS(th)} (V)		C _{iss} (pF) TYP	C _{rss} (pF) TYP	t _{on} (ns) TYP	t _{off} (ns) TYP
						MIN	MAX				
7120	20	1.0	0.14	0.5	2.5	0.5	1.2	220	45	25	140
8120	20	0.86	0.2	0.67	2.5	0.45	1.0	200	80	20	25

Features:

- Low r_{DS(on)} = 0.14Ω for the 7120G and 0.2Ω for the 8120.
- High Current I_D = 1.0A for the 7120G and 0.86A for the 8120.
- Available in a variety of package sizes with low profiles. The TLM621H has a maximum profile (height) of 0.4mm.
- Built in ESD protection up to 2kV (7120 and 7120G only).
- Low Threshold Voltage.
- Logic Level Compatible.

N-Channel:
CTLDM7120-M621H (TLM621H)
CMLDM7120G (SOT-563)
CMPDM7120G (SOT-23)

P-Channel:
CTLDM8120-M621H (TLM621H)
CMLDM8120 (SOT-563)
CMPDM8120 (SOT-23)

Family	BV _{DSS} (V) MIN	I _D (A)	r _{DS(ON)} (Ω) MAX	@ I _D (A)	@ V _{GS} (V)	V _{GS(th)} (V)		C _{iss} (pF) MAX	C _{rss} (pF) MAX	t _{on} (ns) TYP	t _{off} (ns) TYP
						MIN	MAX				
7003E	50	0.28	2.3	0.05	1.8	0.49	1.2	50	5.0	-	-
7003	50	0.28	3.0	0.05	1.8	0.49	1.0	50	5.0	-	-

Features:

- r_{DS(on)} = 2.3Ω for the 7003E and 3.0Ω for the 7003.
- Built in ESD protection up to 2kV.
- Low Threshold Voltage.
- Logic Level Compatible.
- Variety of package sizes.

N-Channel:
CMLDM7003 (SOT-563)
CMLDM7003J (SOT-563)
CMLDM7003E (SOT-563)
CMLDM7003JE (SOT-563)

P-Channel:
CTLDM7003-M621 (TLM621)
CMPDM7003 (SOT-23)

Family	BV _{DSS} (V) MIN	I _D (A)	r _{DS(ON)} (Ω) MAX	@ I _D (A)	@ V _{GS} (V)	V _{GS(th)} (V)		C _{iss} (pF) MAX	C _{rss} (pF) MAX	t _{on} (ns) MAX	t _{off} (ns) MAX
						MIN	MAX				
7002A	60	0.28	2.0	0.5	10	1.0	2.5	50	5.0	20	20
8002A	50	0.28	3.0	0.05	5.0	1.0	2.5	70	7.0	20	20

Features:

- r_{DS(on)} = 2.0Ω for the 7002A and 3.0Ω for the 8002A.
- Low V_{DS(on)}.
- Fast Switching.
- Low Threshold Voltage.
- Logic Level Compatible.
- Variety of package sizes with low profiles. The TLM621H has a maximum profile (height) of 0.4mm.

N-Channel:
CTLDM7002A-M621 (TLM621)
CTLDM7002A-M621H (TLM621H)
CMLDM7002A (SOT-563)
CMLDM7002AJ (SOT-563)
CMPDM7002A (SOT-23)
CMXDM7002A (SOT-26)

P-Channel:
CTLDM8002A-M621 (TLM621)
CTLDM8002A-M621H (TLM621H)
CMLDM8002A (SOT-563)
CMLDM8002AJ (SOT-563)
CMPDM8002A (SOT-23)

N-Channel & P-Channel:
CMLM0708A (SOT-563)

Family	BV _{DSS} (V) MIN	I _D (A)	r _{DS(ON)} (Ω) MAX	@ I _D (A)	@ V _{GS} (V)	V _{GS(th)} (V)		C _{iss} (pF) TYP	C _{rss} (pF) TYP	t _{on} (ns) TYP	t _{off} (ns) TYP
						MIN	MAX				
7001	20	0.1	3.0	0.01	4.0	0.6	0.9	9.0	4.0	50	75
8001	20	0.1	8.0	0.01	4.0	0.6	1.1	45	15	35	80

Features:

- r_{DS(on)} = 3.0Ω for the 7001 and 8.0Ω for the 8001.
- Low Threshold Voltage / Logic Level Compatible.
- Very small package sizes, with low profiles. The SOT-883L has a maximum profile (height) of 0.4mm.

N-Channel:
CEDM7001 (SOT-883L)
CMUDM7001 (SOT-523)

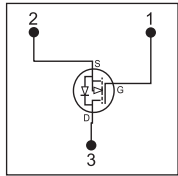
P-Channel:
CEDM8001 (SOT-883L)
CMUDM8001 (SOT-523)

E Indicates Enhanced Specification Device. Enhanced Specification in Bold

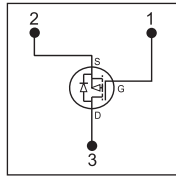


Small Signal Enhancement-mode MOSFETs

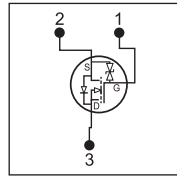
Schematic Drawings



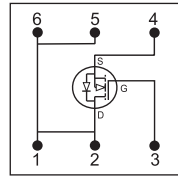
CEDM7001
CMPDM7002A
CMUDM7001



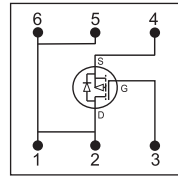
CEDM8001
CMPDM8002A
CMPDM8120
CMUDM8001



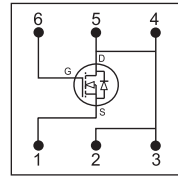
CMPDM7003
CMPDM7120G



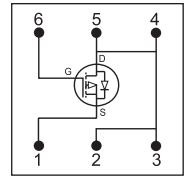
CTLDM7002A-M621



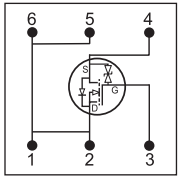
CTLDM8002A-M621
CMLDM8120



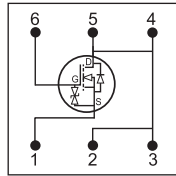
CTLDM7002A-M621H



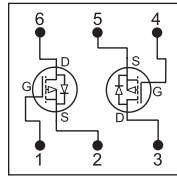
CTLDM8120-M621H
CTLDM8002A-M621H



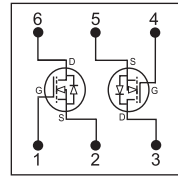
CTLDM7003-M621
CMLDM7120G



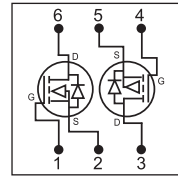
CTLDM7120-M621H



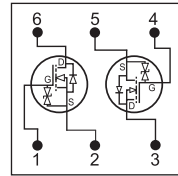
CMLDM8002A



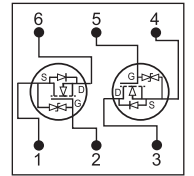
CMLDM7002A
CMXDM7002A



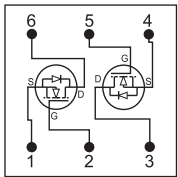
CMLM0708A



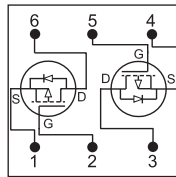
CMLDM7003E
CMLDM7003



CMLDM7003JE
CMLDM7003J



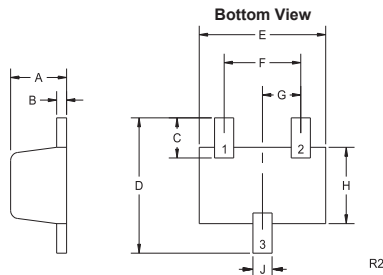
CMLDM7002AJ



CMLDM8002AJ

Featured SMD Mechanical Specifications

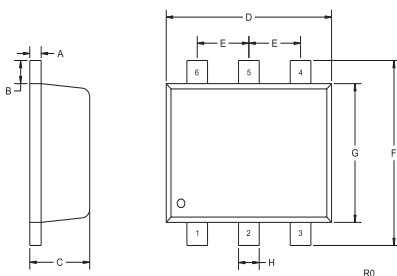
SOT-523



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.023	0.031	0.58	0.78
B	0.002	0.008	0.04	0.20
C	0.013	0.021	0.34	0.54
D	0.059	0.067	1.50	1.70
E	0.059	0.067	1.50	1.70
F	0.035	0.043	0.90	1.10
G		0.020		0.50
H	0.031	0.039	0.78	0.98
J	0.010	0.014	0.25	0.35

SOT-523 (REV: R2)

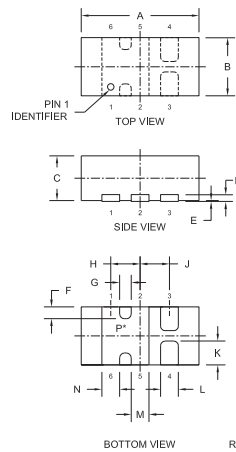
SOT-563



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.007	0.10	0.18
B		0.008		0.20
C	0.022	0.024	0.56	0.60
D	0.059	0.067	1.50	1.70
E		0.020		0.50
F	0.061	0.067	1.55	1.70
G		0.047		1.20
H	0.006	0.012	0.15	0.30

SOT-563 (REV: R0)

TLM621

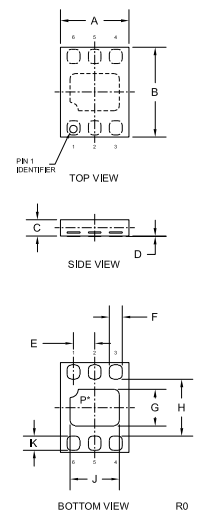


* Exposed pad P connects pins 1, 2, 5, and 6

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)

TLM621H



* Exposed pad P internally connected to pins 3 and 4

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.053	0.065	1.35	1.65
B	0.073	0.085	1.85	2.15
C	0.012	0.016	0.30	0.40
D	0.000	0.002	0.00	0.05
E		0.020		0.50
F	0.008	0.012	0.20	0.30
G	0.027	0.035	0.69	0.89
H	0.053	0.057	1.35	1.45
J	0.039	0.047	0.99	1.19
K	0.011	0.015	0.28	0.38

TLM621H (REV: R0)

CentralTM
Semiconductor Corp.

Innovations in Discrete
Semiconductors

For further information contact:
Sales at Central Semiconductor Corp.
(631) 435-1110 or visit our website at:
www.centalsemi.com

145 Adams Avenue • Hauppauge • New York • 11788 • USA • Tel: (631) 435-1110 • Fax: (631) 435-1824

PA MOSFETS