CMLDM7002A
CMLDM7002AG*
CMLDM7002AJ

SURFACE MOUNT PICOmini™
DUAL N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET

PICOmini™

SOT-563 CASE

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

Central™
Semiconductor Corp.

DESCRIPTION:

These CENTRAL SEMICONDUCTOR devices are dual Enhancement-mode N-Channel Field Effect Transistors, manufactured by the N-Channel DMOS Process, designed for high speed pulsed amplifier and driver applications. The CMLDM7002A utilizes the USA pinout configuration, while the CMLDM7002AJ utilizes the Japanese pinout configuration. These devices offer low $r_{DS\ (ON)}$ and low $V_{DS(ON)}$.

MARKING CODES: **CMLDM7002A: L02**
CMLDM7002AG*: C2G
CMLDM7002AJ: 02J

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	350	mW
Power Dissipation (Note 2)	P_D	300	mW
Power Dissipation (Note 3)	P_D	150	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	357	°C/W

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=20V, V_{DS}=0V		100	nA
I_{DSS}	V_{DS}=60V, V_{GS}=0V		1.0	μA
I_{DSS}	V_{DS}=60V, V_{GS}=0V, T_J=125°C		500	μA
$I_{D(ON)}$	V_{GS}=10V, $V_{DS}\geq 2.0V_{DS(ON)}$	500		mA
BV_{DSS}	V_{GS}=0V, 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}=0V, I_S=400mA		1.2	V
$r_{DS(ON)}$	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}	$V_{DS}\geq 2V_{DS(ON)}$, I_D=200mA	80		mS

Notes: (1) Ceramic or aluminum core PC Board with copper mounting pad area of 4.0 mm²
(2) FR-4 Epoxy PC Board with copper mounting pad area of 4.0 mm²
(3) FR-4 Epoxy PC Board with copper mounting pad area of 1.4 mm²

R4 (8-January 2009)

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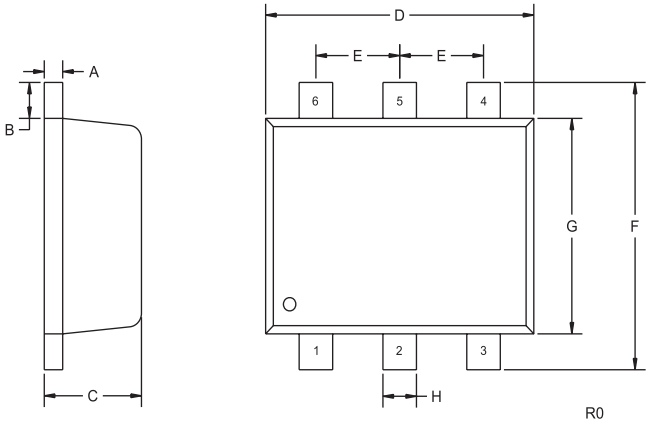
ELECTRICAL CHARACTERISTICS PER TRANSISTOR - Continued: (T_A=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
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
t_{on} / t_{off}	V_{DD}=30V, V_{GS}=10V, I_D=200mA R_G=25Ω, R_L=150Ω		20	ns

SOT-563 CASE - MECHANICAL OUTLINE

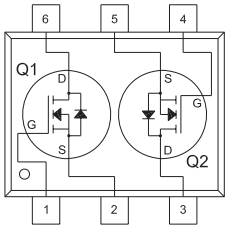


DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.004	0.007	0.10	0.18
B	0.008		0.20	
C	0.022	0.024	0.56	0.60
D	0.059	0.067	1.50	1.70
E	0.020		0.50	
F	0.061	0.067	1.55	1.70
G	0.047		1.20	
H	0.006	0.012	0.15	0.30

SOT-563 (REV: R0)

PIN CONFIGURATIONS

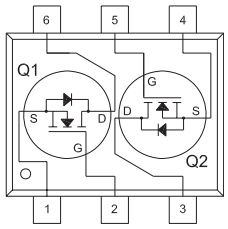
CMLDM7002A (USA Pinout)
CMLDM7002AG*



LEAD CODE:
1) GATE Q1
2) SOURCE Q1
3) DRAIN Q2
4) GATE Q2
5) SOURCE Q2
6) DRAIN Q1

MARKING CODES: CMLDM7002A: L02
CMLDM7002AG*: C2G

CMLDM7002AJ (Japanese Pinout)



LEAD CODE:
1) SOURCE Q1
2) GATE Q1
3) DRAIN Q2
4) SOURCE Q2
5) GATE Q2
6) DRAIN Q1

MARKING CODE: 02J

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