

CMLDM7003
CMLDM7003G*
CMLDM7003J

SURFACE MOUNT SILICON
DUAL N-CHANNEL
ENHANCEMENT-MODE
MOSFETS



SOT-563 CASE

* Device is **Halogen Free** by design

Central
Semiconductor Corp.

www.centrasemi.com

DESCRIPTION:

These CENTRAL SEMICONDUCTOR devices are dual N-Channel enhancement-mode MOSFETs, manufactured by the N-Channel DMOS Process, designed for high speed pulsed amplifier and driver applications. The CMLDM7003 utilizes the USA pinout configuration, while the CMLDM7003J utilizes the Japanese pinout configuration. These devices offer low $r_{DS(ON)}$ and ESD protection up to 2kV.

MARKING CODES: CMLDM7003: C30
CMLDM7003G*: C3G
CMLDM7003J: C3J

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

Drain-Source Voltage
Drain-Gate Voltage
Gate-Source Voltage
Continuous Drain Current
Maximum Pulsed Drain Current
Power Dissipation (Note 1)
Power Dissipation (Note 2)
Power Dissipation (Note 3)
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_{DS} 50
 V_{DG} 50
 V_{GS} 12
 I_D 280
 I_{DM} 1.5
 P_D 350
 P_D 300
 P_D 150
 T_J, T_{stg} -65 to +150
 Θ_{JA} 357

UNITS

V
V
V
mA
A
mW
mW
mW
 $^\circ\text{C}$
 $^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSSF}, I_{GSSR}	$V_{GS}=5.0V$			100	nA
I_{GSSF}, I_{GSSR}	$V_{GS}=10V$			2.0	μA
I_{GSSF}, I_{GSSR}	$V_{GS}=12V$			2.0	μA
I_{DSS}	$V_{DS}=50V, V_{GS}=0$			50	nA
BV_{DSS}	$V_{GS}=0, I_D=10\mu\text{A}$	50			V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.49		1.0	V
V_{SD}	$V_{GS}=0, I_S=115\text{mA}$			1.4	V
$r_{DS(ON)}$	$V_{GS}=1.8V, I_D=50\text{mA}$		1.6	3.0	Ω
$r_{DS(ON)}$	$V_{GS}=2.5V, I_D=50\text{mA}$		1.3	2.5	Ω
$r_{DS(ON)}$	$V_{GS}=5.0V, I_D=50\text{mA}$		1.1	2.0	Ω
g_{FS}	$V_{DS}=10V, I_D=200\text{mA}$	200			mS
C_{rss}	$V_{DS}=25V, V_{GS}=0, f=1.0\text{MHz}$			5.0	pF
C_{iss}	$V_{DS}=25V, V_{GS}=0, f=1.0\text{MHz}$			50	pF
C_{oss}	$V_{DS}=25V, V_{GS}=0, f=1.0\text{MHz}$			25	pF
$Q_{g(tot)}$	$V_{DS}=25V, V_{GS}=4.5V, I_D=100\text{mA}$		0.764		nC
Q_{gs}	$V_{DS}=25V, V_{GS}=4.5V, I_D=100\text{mA}$		0.148		nC
Q_{gd}	$V_{DS}=25V, V_{GS}=4.5V, I_D=100\text{mA}$		0.156		nC

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

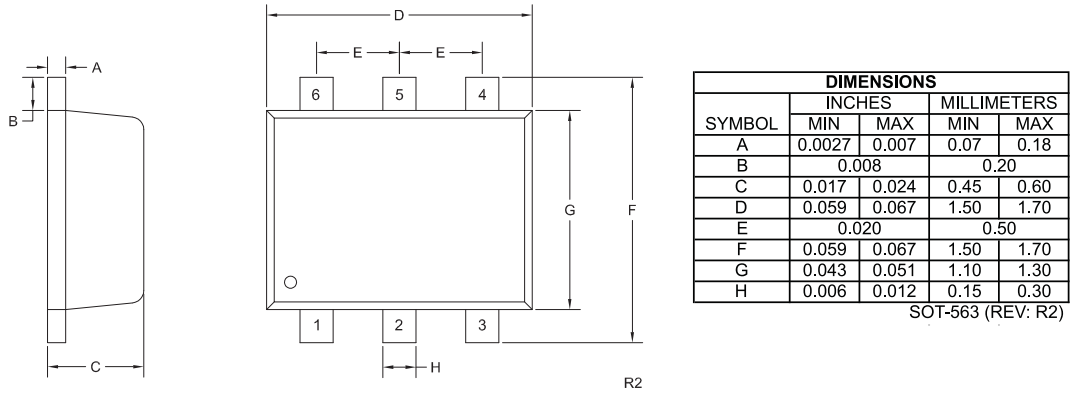
R9 (8-June 2015)

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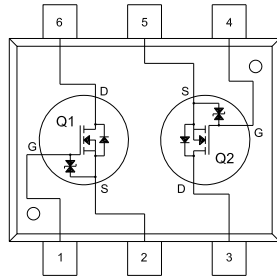


SOT-563 CASE - MECHANICAL OUTLINE



PIN CONFIGURATIONS

CMLDM7003 (USA Pinout)
CMLDM7003G*



LEAD CODE:

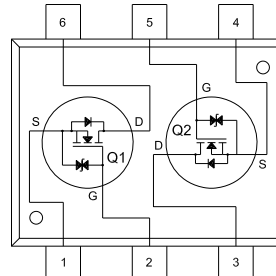
- 1) Gate Q1
- 2) Source Q1
- 3) Drain Q2
- 4) Gate Q2
- 5) Source Q2
- 6) Drain Q1

MARKING CODES:

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CMLDM7003G*: C3G

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CMLDM7003J (Japanese Pinout)



LEAD CODE:

- 1) Source Q1
- 2) Gate Q1
- 3) Drain Q2
- 4) Source Q2
- 5) Gate Q2
- 6) Drain Q1

MARKING CODE: C3J

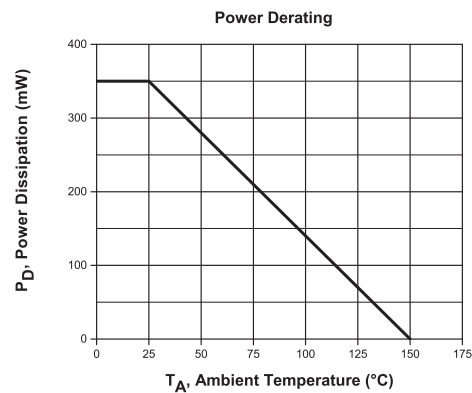
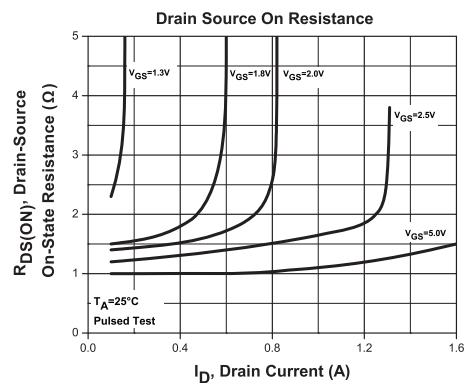
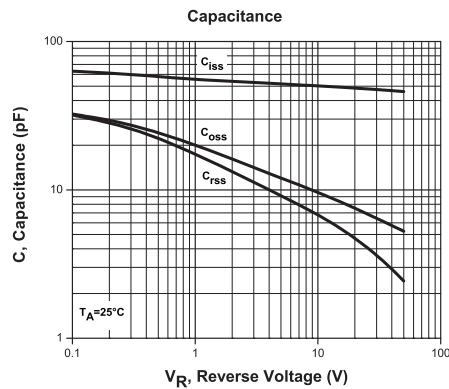
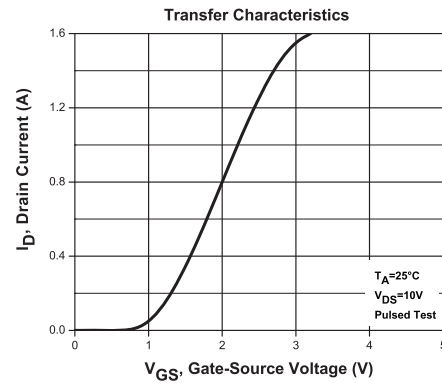
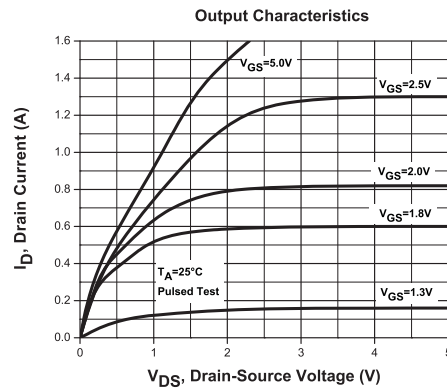
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TYPICAL ELECTRICAL CHARACTERISTICS



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SERVICES

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- Package Base Options
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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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