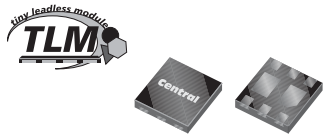
CTLDM7003T-M563D

SURFACE MOUNT
DUAL, N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFETS



Top View Bottom View

TLM563D CASE

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

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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CTLDM7003T-M563D is a Dual N-channel MOSFET packaged in a space saving 1.6 x 1.6mm TLM™ surface mount package. This device is a TLM™ equivalent of the popular CMLDM7003T, SOT-563 device, featuring enhanced thermal characteristics, a package footprint compatible with standard SOT-563 mounting pad geometries, and a height profile of only 0.4mm.

MARKING CODE: CJA

APPLICATIONS:

- Load Power Switches
- DC/DC Converters
- Battery powered devices including Cell Phones, PDAs, Digital Cameras, MP3 Players, etc.

FEATURES:

- ESD protection up to 2kV
- Dual MOSFETs
- Low $r_{DS(ON)}$ (1.6Ω TYP @ V_{GS}=1.8V)
- TLM563D with a package profile of 0.4mm, compatible with SOT-563 mounting geometries

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	50	V
Drain-Gate Voltage	V_{DG}	50	V
Gate-Source Voltage	V_{GS}	12	V
Continuous Drain Current	I_D	280	mA
Maximum Pulsed Drain Current	I_{DM}	1.5	A
Power Dissipation (Note 1)	P_D	350	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance (Note 1)	Θ_{JA}	357	°C/W

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=5.0V, V_{DS}=0			50	nA
I_{GSSF}, I_{GSSR}	V_{GS}=10V, V_{DS}=0			0.5	μA
I_{GSSF}, I_{GSSR}	V_{GS}=12V, V_{DS}=0			1.0	μA
I_{DSS}	V_{DS}=50V, V_{GS}=0			50	nA
BV_{DSS}	V_{GS}=0, I_D=10μA	50			V
$V_{GS(th)}$	V_{DS}=10V, I_D=250μA	0.75		1.2	V
V_{SD}	V_{GS}=0, I_S=115mA			1.4	V
$r_{DS(ON)}$	V_{GS}=1.8V, I_D=50mA		1.6	2.3	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=50mA		1.3	1.9	Ω
$r_{DS(ON)}$	V_{GS}=5.0V, I_D=50mA		1.1	1.5	Ω
g_{FS}	V_{DS}=10V, I_D=200mA	200			mS
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

Notes: (1) Mounted on 2 inch square FR4 PCB with copper mounting pad area of 1.8mm^2.

R1 (17-February 2010)

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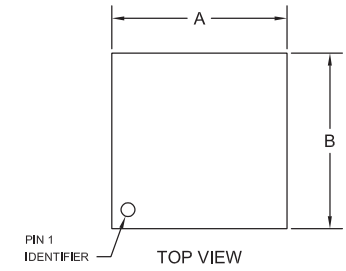
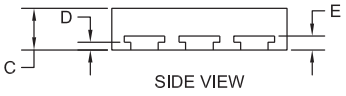
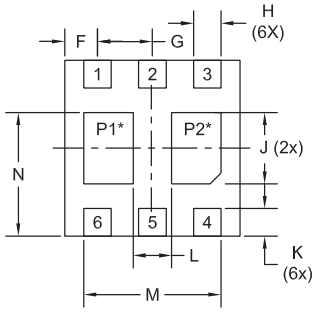
TLM563D CASE - MECHANICAL OUTLINE





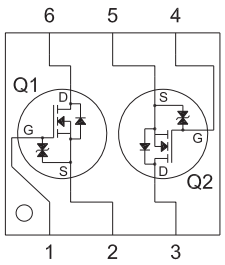


*Note:
-Exposed pad P1 common to pin 6.
-Exposed pad P2 common to pin 3.

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.062	0.064	1.57	1.63
B	0.062	0.064	1.57	1.63
C	0.014	0.017	0.36	0.43
D	0.002	0.004	0.04	0.10
E	0.004	0.006	0.10	0.16
F	0.011	0.013	0.27	0.33
G	0.019	0.021	0.47	0.53
H	0.009	0.011	0.22	0.28
J	0.024	0.027	0.62	0.68
K	0.009	0.011	0.22	0.28
L	0.013	0.015	0.32	0.38
M	0.048	0.050	1.22	1.28
N	0.043	0.045	1.09	1.16

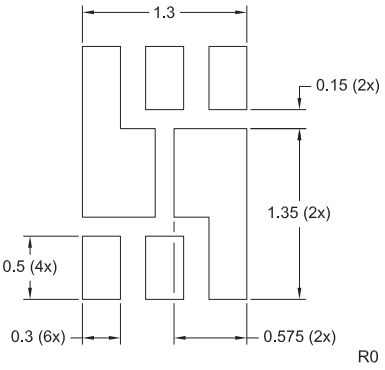
TLM563D (REV:R1)

PIN CONFIGURATION



SUGGESTED MOUNTING PADS

(Dimensions in mm)



LEAD CODE:
1) Gate Q1
2) Source Q1
3) Drain Q2
4) Gate Q2
5) Source Q2
6) Drain Q1

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