

CMLDM7484

**SURFACE MOUNT
N-CHANNEL AND P-CHANNEL
ENHANCEMENT-MODE
COMPLEMENTARY MOSFETS**



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PICOmini™



SOT-563 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMLDM7484 consists of complementary N-Channel and P-Channel Enhancement-mode silicon MOSFETs designed for high speed pulsed amplifier and driver applications. These MOSFETs offer Very Low $r_{DS(ON)}$ and Low Threshold Voltage.

MARKING CODE: 8C7

FEATURES:

- ESD Protection up to 2kV
- 350mW Power Dissipation
- Very Low $r_{DS(ON)}$
- Low Threshold Voltage
- Logic Level Compatible
- Small, SOT-563 Surface Mount Package

APPLICATIONS:

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

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

	SYMBOL		UNITS
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	8.0	V
Continuous Drain Current	I_D	450	mA
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	$^\circ\text{C}$
Thermal Resistance (Note 1)	θ_{JA}	357	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$)

SYMBOL	TEST CONDITIONS	N-CH (Q1)		P-CH (Q2)		UNITS
		MIN	MAX	MIN	MAX	
$I_{GSS(F)}, I_{GSS(R)}$	$V_{GS}=8.0\text{V}, V_{DS}=0$	-	3.0	-	3.0	μA
I_{DSS}	$V_{DS}=30\text{V}, V_{GS}=0$	-	1.0	-	1.0	μA
BV_{DSS}	$V_{GS}=0, I_D=10\mu\text{A}$	30	-	-	-	V
BV_{DSS}	$V_{GS}=0, I_D=100\mu\text{A}$	-	-	30	-	V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.5	1.0	0.5	1.0	V
V_{SD}	$V_{GS}=0, I_S=400\text{mA}$	0.5	1.1	-	-	V
V_{SD}	$V_{GS}=0, I_S=100\text{mA}$	-	-	0.5	1.1	V
$r_{DS(ON)}$	$V_{GS}=4.5\text{V}, I_D=200\text{mA}$	-	0.46	-	-	Ω
$r_{DS(ON)}$	$V_{GS}=4.5\text{V}, I_D=430\text{mA}$	-	-	-	1.1	Ω
$r_{DS(ON)}$	$V_{GS}=2.5\text{V}, I_D=100\text{mA}$	-	0.56	-	-	Ω
$r_{DS(ON)}$	$V_{GS}=2.5\text{V}, I_D=200\text{mA}$	-	-	-	2.0	Ω
$r_{DS(ON)}$	$V_{GS}=1.8\text{V}, I_D=75\text{mA}$	-	0.73	-	-	Ω
$r_{DS(ON)}$	$V_{GS}=1.8\text{V}, I_D=100\text{mA}$	-	-	-	3.3	Ω

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

R2 (27-January 2011)

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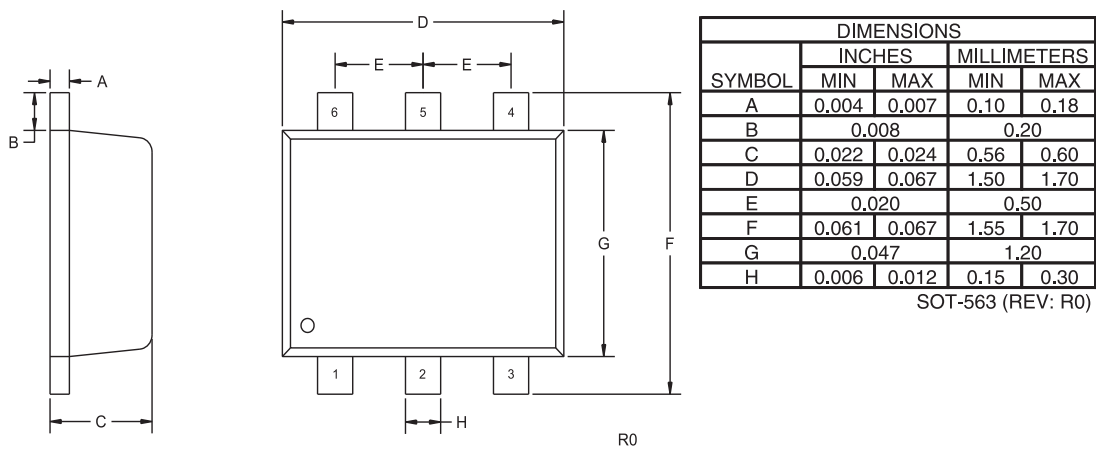
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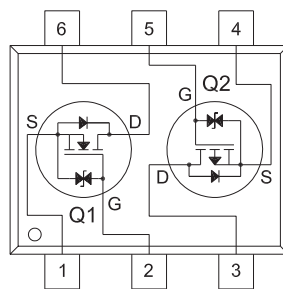
ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$)

SYMBOL	TEST CONDITIONS	N-CH (Q1)		P-CH (Q2)		UNITS
		MIN	MAX	MIN	MAX	
g_{FS}	$V_{DS}=10\text{V}, I_D=100\text{mA}$	200	-	200	-	mS
C_{rss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$	-	10	-	10	pF
C_{iss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$	-	45	-	55	pF
C_{oss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$	-	15	-	15	pF

SOT-563 - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

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