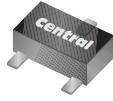


CMUDM7004
SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET

ULTRAmini™



SOT-523 CASE



www.centraalsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMUDM7004 is an Enhancement-mode N-Channel Field Effect Transistor, manufactured by the N-Channel DMOS Process, designed for high speed pulsed amplifier and driver applications. This MOSFET offers Low $r_{DS(on)}$ and Low Threshold Voltage.

MARKING CODE: 74C

FEATURES:

- ESD Protection up to 2kV
- Low $r_{DS(on)}$
- Low Threshold Voltage
- Logic Level Compatible
- Small, SOT-523 Surface Mount Package
- Complimentary P-Channel MOSFET: CMUDM8004

APPLICATIONS:

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

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

Drain-Source Voltage	
Gate-Source Voltage	
Continuous Drain Current	
Power Dissipation	
Operating and Storage Junction Temperature	

SYMBOL

V_{DS}
V_{GS}
I_D
P_D
T_J, T_{stg}

30
8.0
450
250
-65 to +150

UNITS

V
V
mA
mW
$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSS}, I_{GSSR}	$V_{GS}=8.0\text{V}, V_{DS}=0$			3.0	μA
I_{DSS}	$V_{DS}=30\text{V}, V_{GS}=0$			1.0	μA
BV_{DSS}	$V_{GS}=0, I_D=10\mu\text{A}$	30			V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.5		1.0	V
V_{SD}	$V_{GS}=0, I_S=400\text{mA}$	0.5		1.1	V
$r_{DS(ON)}$	$V_{GS}=4.5\text{V}, I_D=200\text{mA}$		280	460	$\text{m}\Omega$
$r_{DS(ON)}$	$V_{GS}=2.5\text{V}, I_D=100\text{mA}$		390	560	$\text{m}\Omega$
$r_{DS(ON)}$	$V_{GS}=1.8\text{V}, I_D=75\text{mA}$		550	730	$\text{m}\Omega$
gFS	$V_{DS}=10\text{V}, I_D=100\text{mA}$	200			mS
C_{rss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		5.0		pF
C_{iss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		43		pF
C_{oss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		8.0		pF
t_{on}	$V_{DS}=5.0\text{V}, V_{GS}=4.0\text{V}, I_D=75\text{mA}, R_G=10\Omega$		20		ns
t_{off}	$V_{DS}=5.0\text{V}, V_{GS}=4.0\text{V}, I_D=75\text{mA}, R_G=10\Omega$		75		ns

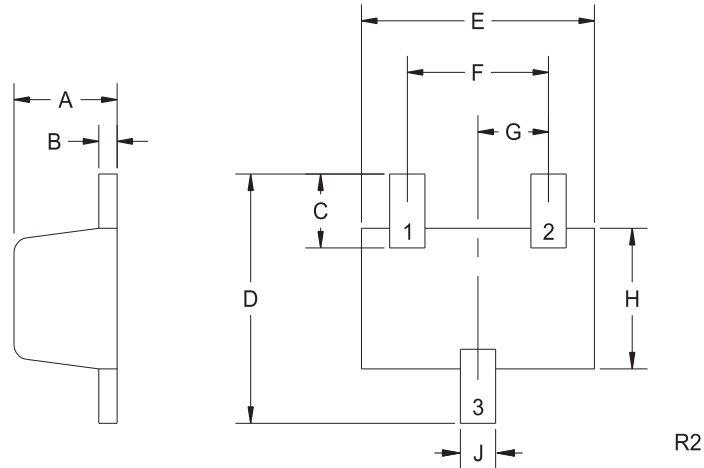
R0 (17-June 2010)

CMUDM7004

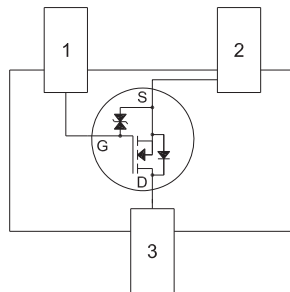
**SURFACE MOUNT
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SOT-523 CASE - MECHANICAL OUTLINE



**PIN CONFIGURATION
(Bottom View)**



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)

LEAD CODE:

- 1) Gate
- 2) Source
- 3) Drain

MARKING CODE: 74C

R0 (17-June 2010)

www.centalsemi.com

www.DataSheet4U.com

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