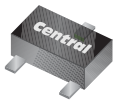
CMUDM7004

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET

ULTRAmini™



SOT-523 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMUDM7004 is an Enhancement-mode N-Channel MOSFET, 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 Theshold 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°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	P_D	250	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

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

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=8.0V, V_{DS}=0			3.0	μA
I_{DSS}	V_{DS}=30V, V_{GS}=0			1.0	μA
BV_{DSS}	V_{GS}=0, I_D=10μA	30			V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.5		1.0	V
V_{SD}	V_{GS}=0, I_S=400mA	0.5		1.1	V
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=200mA		280	460	mΩ
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=100mA		390	560	mΩ
$r_{DS(ON)}$	V_{GS}=1.8V, I_D=75mA		550	730	mΩ
$Q_{g(tot)}$	V_{DS}=15V, V_{GS}=4.5V, I_D=1.0A		0.792		nC
Q_{gs}	V_{DS}=15V, V_{GS}=4.5V, I_D=1.0A		0.15		nC
Q_{gd}	V_{DS}=15V, V_{GS}=4.5V, I_D=1.0A		0.23		nC
g_{FS}	V_{DS}=10V, I_D=100mA	200			mS
C_{rss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		5.0	10	pF
C_{iss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		43	45	pF
C_{oss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		8.0	15	pF
t_{on}	V_{DS}=5.0V, V_{GS}=4.0V, I_D=75mA, R_G=10Ω		20		ns
t_{off}	V_{DS}=5.0V, V_{GS}=4.0V, I_D=75mA, R_G=10Ω		75		ns

R2 (2-August 2011)

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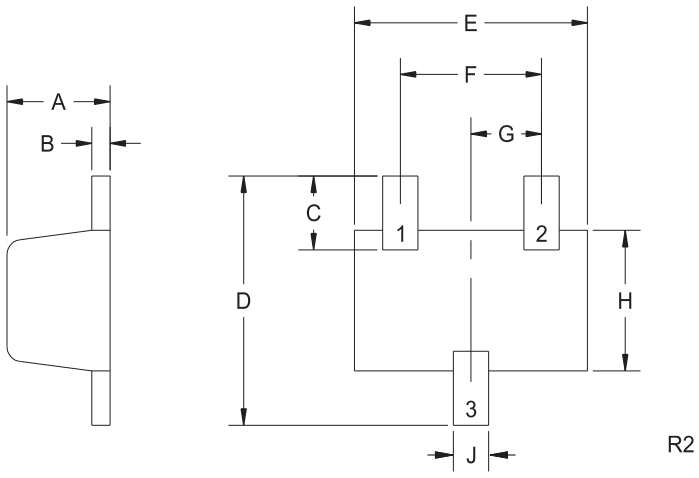
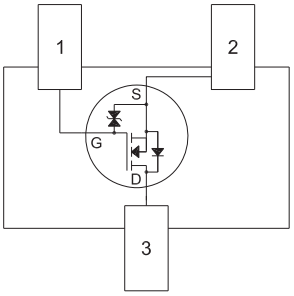
SOT-523 CASE - MECHANICAL OUTLINE



R2

PIN CONFIGURATION
(Bottom View)



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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