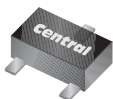


CMUDM7001

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET

ULTRAmini™



SOT-523 CASE

APPLICATIONS:

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

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

Drain-Source Voltage
Gate-Source Voltage
Continuous Drain Current (Steady State)
Continuous Drain Current
Power Dissipation
Operating and Storage Junction Temperature



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMUDM7001 is an N-Channel Enhancement-mode Silicon 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: C7A

FEATURES:

- Power Dissipation 250mW
- Low $r_{DS(ON)}$
- Low Threshold Voltage
- Logic Level Compatible
- Small, SOT-523 Surface Mount Package
- Complementary Device: CMUDM8001

SYMBOL		UNITS
V_{DS}	20	V
V_{GS}	10	V
I_D	100	mA
I_D	200	mA
P_D	250	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSSF}, I_{GSSR}	$V_{GS}=10\text{V}, V_{DS}=0$			1.0	μA
I_{DSS}	$V_{DS}=20\text{V}, V_{GS}=0$			1.0	μA
BV_{DSS}	$V_{GS}=0, I_D=100\mu\text{A}$	20			V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.6		0.9	V
$r_{DS(ON)}$	$V_{GS}=4.0\text{V}, I_D=10\text{mA}$		0.9	3.0	Ω
$r_{DS(ON)}$	$V_{GS}=2.5\text{V}, I_D=10\text{mA}$		1.3	4.0	Ω
$r_{DS(ON)}$	$V_{GS}=1.5\text{V}, I_D=1.0\text{mA}$			15	Ω
$Q_g(\text{tot})$	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$		0.566		nC
Q_{gs}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$		0.16		nC
Q_{gd}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$		0.08		nC
g_{FS}	$V_{DS}=10\text{V}, I_D=100\text{mA}$	100			mS
C_{rss}	$V_{DS}=3.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		4.0		pF
C_{iss}	$V_{DS}=3.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		9.0		pF
C_{oss}	$V_{DS}=3.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		9.5		pF
t_{on}	$V_{DD}=3.0\text{V}, V_{GS}=2.5\text{V}, I_D=10\text{mA}$		50		ns
t_{off}	$V_{DD}=3.0\text{V}, V_{GS}=2.5\text{V}, I_D=10\text{mA}$		75		ns

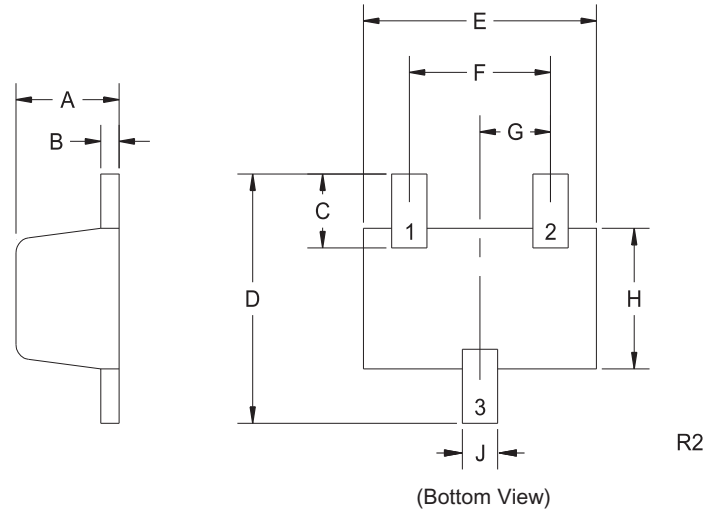
R3 (22-August 2011)

CMUDM7001

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



SOT-523 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE: C7A

DIMENSIONS				
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)

R3 (22-August 2011)