

CMNDM7001

**SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET**

FEMTOmini™



SOT-953 CASE

- Device is **Halogen Free** by design

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	



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMNDM7001 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 Threshold Voltage.

MARKING CODE: AC

FEATURES:

- Low 0.5mm Package Profile
- Low $r_{DS(ON)}$
- Low Threshold Voltage
- Logic Level Compatible
- Small, FEMTOmini™ 1.0 x 0.8mm, SOT-953 Surface Mount Package

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

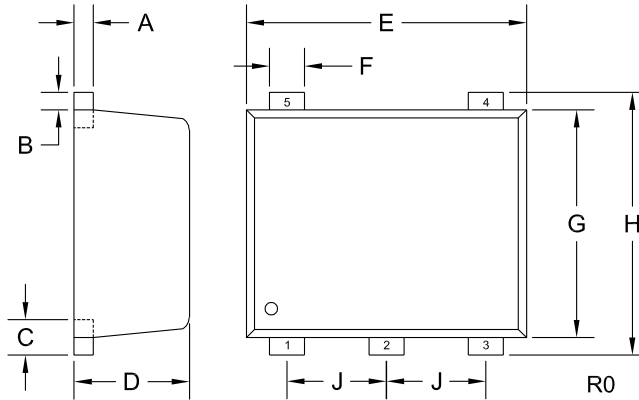
R3 (22-August 2011)

CMNDM7001

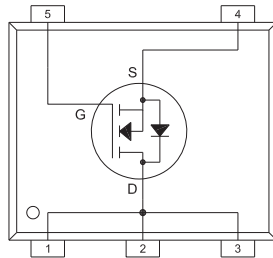
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SOT-953 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODE: AC

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.002	0.006	0.050	0.150
B	0.002	0.006	0.050	0.150
C	0.005	0.007	0.125	0.175
D	0.016	0.020	0.400	0.500
E	0.037	0.041	0.950	1.050
F	0.004	0.008	0.100	0.200
G	0.030	0.033	0.750	0.850
H	0.037	0.041	0.950	1.050
J	0.014		0.350	

SOT-953 (REV: R0)

R3 (22-August 2011)