CMNDM7001

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET

FEMTOmini™

SOT-953 CASE

• Device is ***Halogen Free*** by design

Central Semiconductor Corp.

www.centralsemi.com

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

APPLICATIONS:

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

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

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	10	V
Continuous Drain Current (Steady State)	I_D	100	mA
Continuous Drain Current	I_D	200	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)

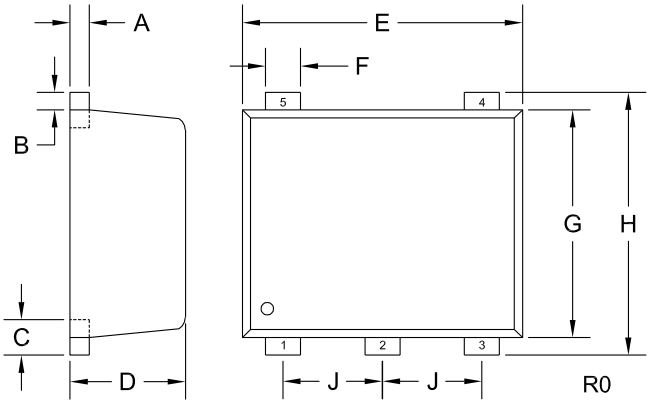
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=10V, V_{DS}=0			1.0	μA
I_{DSS}	V_{DS}=20V, V_{GS}=0			1.0	μA
BV_{DSS}	V_{GS}=0, I_D=100μA	20			V
$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.6		0.9	V
$r_{DS(ON)}$	V_{GS}=4.0V, I_D=10mA		0.9	3.0	Ω
$r_{DS(ON)}$	V_{GS}=2.5V,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

R3 (22-August 2011)

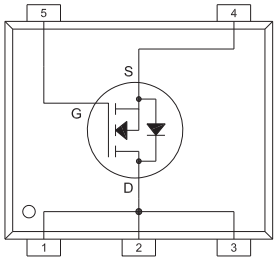
CMNDM7001

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET

SOT-953 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



DIMENSIONS				
SYMBOL	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)

LEAD CODE:
1) Drain
2) Drain
3) Drain
4) Source
5) Gate

MARKING CODE: AC

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

Worldwide Distributors:
www.centralsemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centralsemi.com/terms