

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)

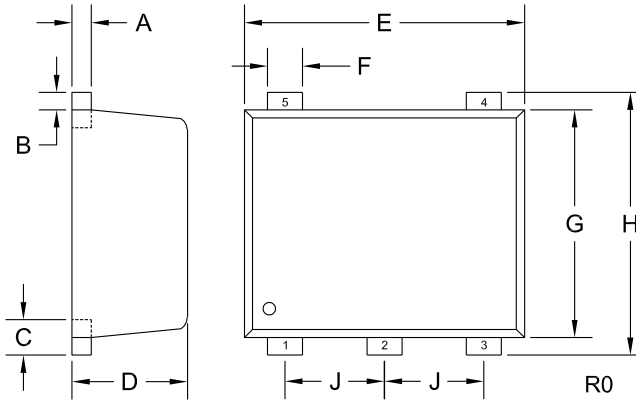
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{GSSF}, I_{GSSR}$	$V_{GS}=10V, V_{DS}=0$			1.0	$\mu\text{A}$
$I_{DSS}$	$V_{DS}=20V, V_{GS}=0$			1.0	$\mu\text{A}$
$BV_{DSS}$	$V_{GS}=0, I_D=100\mu\text{A}$	20			V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.6		0.9	V
$r_{DS(ON)}$	$V_{GS}=4.0V, I_D=10\text{mA}$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

R3 (22-August 2011)

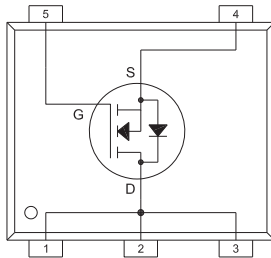
CMNDM7001  
 SURFACE MOUNT  
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SOT-953 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODE: AC

SYMBOL	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)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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<https://www.centalsemi.com>

# Product End of Life Notification

<b>PDN ID:</b>	PDN01272
<b>Notification Date:</b>	11/21/24
<b>Last Buy Date:</b>	5/21/25
<b>Last Shipment Date</b>	11/21/25

Summary: All devices manufactured in the SOT-953 package are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Portfolio Management. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

**\* All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

<b>Central Part Number</b>	<b>Suggested Replacement</b>
CMNDM7001 BK	N/A
CMNDM7001 TR	N/A
CMNDM8001 BK	N/A
CMNDM8001 TR	N/A
CMNTVS12V BK	N/A
CMNTVS12V TR	N/A
CMNTVS5V0 BK	N/A
CMNTVS5V0 TR	N/A
CMNT3904E BK	N/A
CMNT3904E TR	N/A
CMNT3906E BK	N/A
CMNT3906E TR	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. If you would like assistance, please visit <https://my.centalsemi.com/submit-inquiry?type=ER> to submit an online inquiry.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.