

CMNDM8001
SURFACE MOUNT
P-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMNDM8001 is a P-Channel Enhancement-mode Silicon MOSFET, manufactured by the P-Channel DMOS Process, designed for high speed pulsed amplifier and driver applications. This MOSFET offers Low $r_{DS(ON)}$ and Low Threshold Voltage.

FEMTOmini™



SOT-953 CASE

- Device is **Halogen Free** by design

APPLICATIONS:

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

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

	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	$^\circ\text{C}$

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

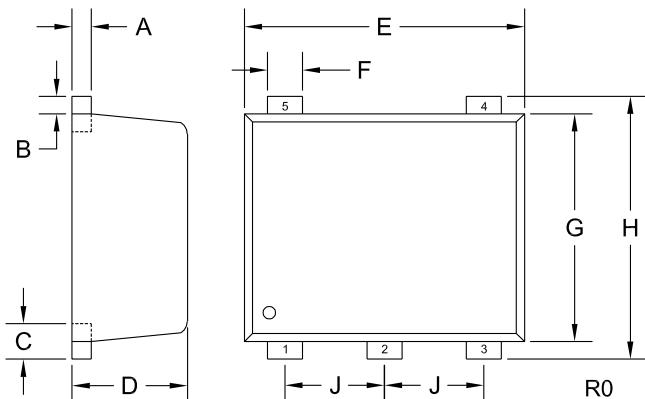
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSSF}, I_{GSSR}	$V_{GS}=10\text{V}, V_{DS}=0$			1.0	μA
I_{DSS}	$V_{DS}=20\text{V}, V_{GS}=0$			1.0	μA
BV_{DSS}	$V_{GS}=0, I_D=100\mu\text{A}$	20			V
$V_{GS(\text{th})}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	0.6		1.1	V
$r_{DS(\text{ON})}$	$V_{GS}=4.0\text{V}, I_D=10\text{mA}$		1.9	8.0	Ω
$r_{DS(\text{ON})}$	$V_{GS}=2.5\text{V}, I_D=10\text{mA}$		2.4	12	Ω
$r_{DS(\text{ON})}$	$V_{GS}=1.5\text{V}, I_D=1.0\text{mA}$			45	Ω
$Q_{g(\text{tot})}$	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$		0.658		nC
Q_{gs}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$		0.158		nC
Q_{gd}	$V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$		0.181		nC
g_{FS}	$V_{DS}=10\text{V}, I_D=100\text{mA}$	100			mS
C_{rss}	$V_{DS}=3.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		15		pF
C_{iss}	$V_{DS}=3.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		45		pF
C_{oss}	$V_{DS}=3.0\text{V}, V_{GS}=0, f=1.0\text{MHz}$		15		pF
t_{on}	$V_{DD}=3.0\text{V}, V_{GS}=2.5\text{V}, I_D=10\text{mA}$		35		ns
t_{off}	$V_{DD}=3.0\text{V}, V_{GS}=2.5\text{V}, I_D=10\text{mA}$		80		ns

CMNDM8001

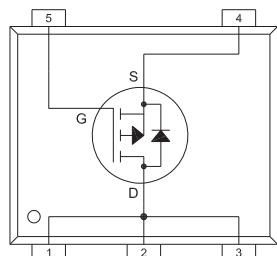
SURFACE MOUNT
P-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



SOT-953 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODE: BC

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



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



<https://www. centralesemi. com>

Product End of Life Notification

PDN ID:	PDN01272
Notification Date:	11/21/24
Last Buy Date:	5/21/25
Last Shipment Date	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.**

Central Part Number	Suggested Replacement
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. centralesemi. 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.