

CMPDM302PH

SURFACE MOUNT SILICON
ENHANCEMENT-MODE
P-CHANNEL MOSFET



SOT-23F CASE



www.centralemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPDM302PH is a high current P-channel enhancement-mode silicon MOSFET, manufactured by the P-channel DMOS process, and is designed for high speed pulsed amplifier and driver applications. This MOSFET offers high current, low $r_{DS(ON)}$, low threshold voltage, and low leakage current.

MARKING CODE: 302C

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)
Maximum Pulsed Drain Current, $t_p=10\mu\text{s}$
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

FEATURES:

- Low $r_{DS(ON)}$ (0.129 Ω MAX @ $V_{GS}=2.5\text{V}$)
- High current ($I_D=2.4\text{A}$)
- Logic level compatibility

SYMBOL		UNITS
V_{DS}	30	V
V_{GS}	12	V
I_D	2.4	A
I_{DM}	9.6	A
P_D	350	mW
T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
θ_{JA}	357	$^\circ\text{C/W}$

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

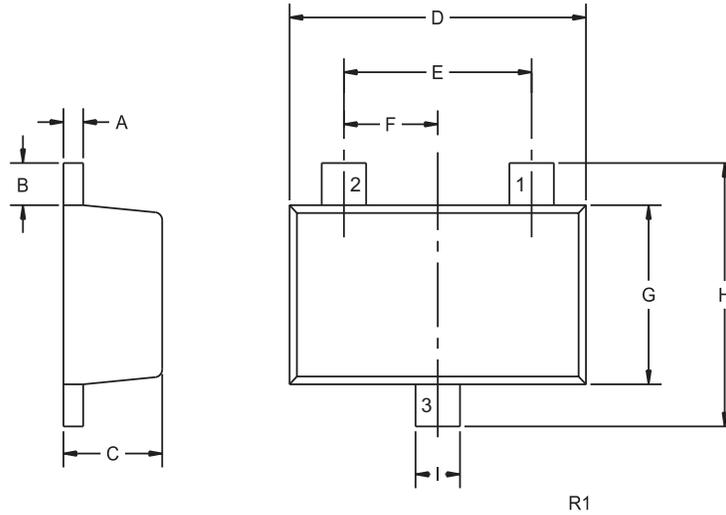
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSSF}, I_{GSSR}	$V_{GS}=12\text{V}, V_{DS}=0$			100	nA
I_{DSS}	$V_{DS}=20\text{V}, V_{GS}=0$			1.0	μA
BV_{DSS}	$V_{GS}=0, I_D=250\mu\text{A}$	30			V
$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=250\mu\text{A}$	0.7		1.4	V
$r_{DS(ON)}$	$V_{GS}=4.5\text{V}, I_D=1.2\text{A}$		0.050	0.091	Ω
$r_{DS(ON)}$	$V_{GS}=2.5\text{V}, I_D=1.2\text{A}$		0.066	0.129	Ω
g_{FS}	$V_{DS}=5.0\text{V}, I_D=2.4\text{A}$		4.6		S
C_{rss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1.0\text{MHz}$		69		pF
C_{iss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1.0\text{MHz}$		800		pF
C_{oss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1.0\text{MHz}$		62		pF
$Q_g(\text{tot})$	$V_{DD}=10\text{V}, V_{GS}=5.0\text{V}, I_D=2.4\text{A}$		7.0	9.6	nC
Q_{gs}	$V_{DD}=10\text{V}, V_{GS}=5.0\text{V}, I_D=2.4\text{A}$		1.4	4.2	nC
Q_{gd}	$V_{DD}=10\text{V}, V_{GS}=5.0\text{V}, I_D=2.4\text{A}$		1.5	2.6	nC
t_{on}	$V_{DD}=10\text{V}, I_D=2.4\text{A}, R_G=10\Omega$		12		ns
t_{off}	$V_{DD}=10\text{V}, I_D=2.4\text{A}, R_G=10\Omega$		17		ns

R2 (24-February 2014)

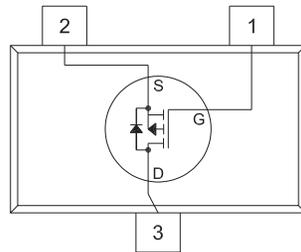
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SOT-23F CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.008	0.10	0.20
B	0.012	0.020	0.30	0.50
C	0.031	0.039	0.80	1.00
D	0.110	0.118	2.80	3.00
E	0.075		1.90	
F	0.037		0.95	
G	0.059	0.067	1.50	1.70
H	0.091	0.098	2.30	2.50
I	0.014	0.018	0.35	0.45

SOT-23F (REV: R1)

LEAD CODE:

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

MARKING CODE: 302C

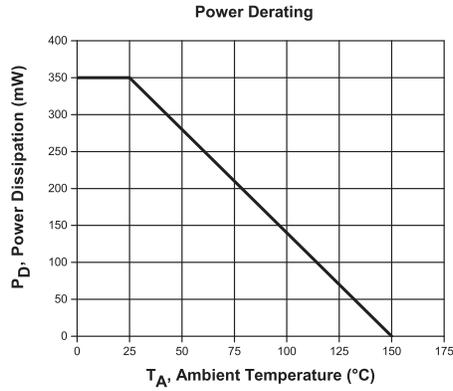
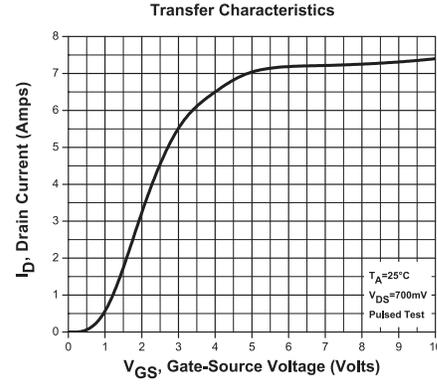
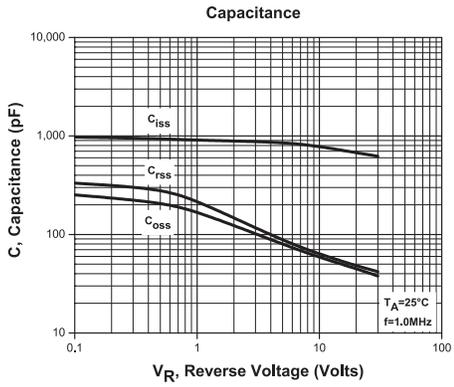
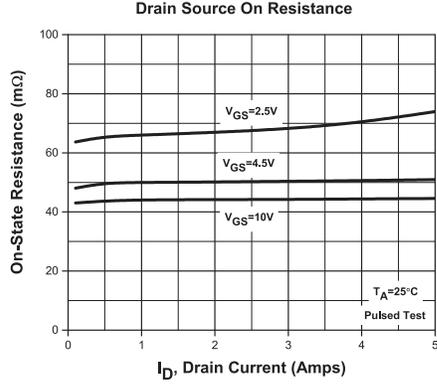
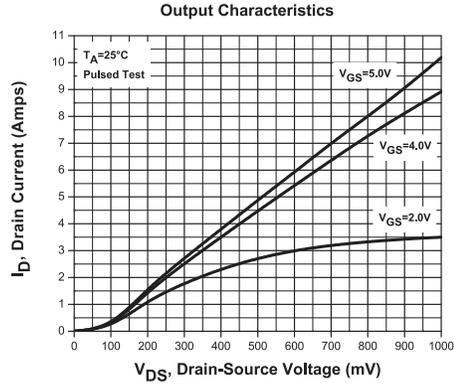
R2 (24-February 2014)

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TYPICAL ELECTRICAL CHARACTERISTICS



R2 (24-February 2014)

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

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Worldwide Distributors:
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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.centrasemi.com/terms



<http://www.centrasemi.com>

Product End of Life Notification

PDN ID:	PDN01070 Rev:001
Notification Date:	4/05/18
Last Buy Date:	N/A
Last Shipment Date	N/A

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. We are unable to accept any further orders for these products **unless** we have available inventory on hand.

You may have purchased one or more of the products listed. Please do not hesitate to contact your local Central Semiconductor sales representative with any questions or needs you may have. Central regrets any inconvenience this may cause.

Sincerely,

Central Semiconductor Corp.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. 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.



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Product End of Life Notification

PDN ID:	PDN01070 Rev:001
Notification Date:	4/05/18
Last Buy Date:	N/A
Last Shipment Date	N/A

Summary: The following MOSFET devices manufactured in the SOT-23F package have been discontinued and are now classified as End of Life (EOL). Rev:001 to PDN#01070, originally issued on March, 21, 2018, is being issued to remove part #s CEN1232 and CEN1233 due to market demand; these devices are once again active.

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by various 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 Product Management Process. Any replacement product will be noted below. The effective date for placing the last purchase order will be six(6) months from the date of this notice and twelve(12) months from the notice date for final shipments; this may be extended if inventory is available.

<u>Central Part Number</u>	<u>Replacement</u>
CMPDM202PH BK	N/A
CMPDM202PH TR	N/A
CMPDM203NH BK	N/A
CMPDM203NH TR	N/A
CMPDM302PH BK	N/A
CMPDM302PH TR	N/A
CMPDM303NH BK	N/A
CMPDM303NH 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. Please email your requests to engineering@centrasemi.com.

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