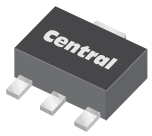
CXDM3069N

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



SOT-89 CASE

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXDM3069N is a high current N-channel enhancement-mode silicon MOSFET, 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: FULL PART NUMBER

APPLICATIONS:

- Load/Power switches
- Power supply converter circuits
- Battery powered portable equipment

FEATURES:

- Low $r_{DS(ON)}$ (50mΩ MAX @ V_{GS}=2.5V)
- High current (I_D=6.9A)
- Logic level compatibility

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	12	V
Continuous Drain Current (Steady State)	I_D	6.9	A
Maximum Pulsed Drain Current, tp=10μs	I_{DM}	40	A
Power Dissipation	P_D	1.2	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-55 to +150	°C
Thermal Resistance	Θ_{JA}	104	°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=12V, V_{DS}=0			100	nA
I_{DSS}	V_{DS}=24V, V_{GS}=0			1.0	μA
BV_{DSS}	V_{GS}=0, I_D=250μA	30			V
$V_{GS(th)}$	V_{GS}=V_{DS}, I_D=250μA	0.7	0.9	1.4	V
$r_{DS(ON)}$	V_{GS}=10V, I_D=7.0A		25	30	mΩ
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=6.0A		28	35	mΩ
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=4.0A		38	50	mΩ
$Q_{g(tot)}$	V_{DS}=15V, V_{GS}=10V, I_D=5.4A		11		nC
Q_{gs}	V_{DS}=15V, V_{GS}=10V, I_D=5.4A		1.0		nC
Q_{gd}	V_{DS}=15V, V_{GS}=10V, I_D=5.4A		1.2		nC
C_{rss}	V_{DS}=15V, V_{GS}=0, f=1.0MHz		47		pF
C_{iss}	V_{DS}=15V, V_{GS}=0, f=1.0MHz		580		pF
C_{oss}	V_{DS}=15V, V_{GS}=0, f=1.0MHz		42		pF
t_{on}	V_{DD}=15V, I_D=1.0A, R_G=15Ω		20		ns
t_{off}	V_{DD}=15V, I_D=1.0A, R_G=15Ω		28		ns

R1 (10-August 2012)

CXDM3069N

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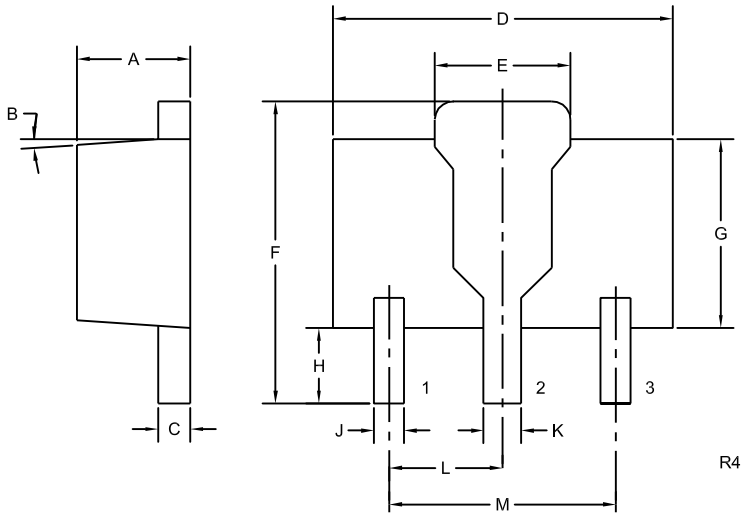
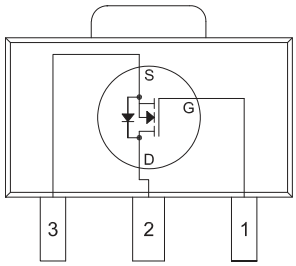
SOT-89 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



(Top View)
Tab is common to pin 2

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.014	0.018	0.35	0.46
D	0.173	0.185	4.40	4.70
E	0.064	0.074	1.62	1.87
F	0.146	0.177	3.70	4.50
G	0.090	0.106	2.29	2.70
H	0.028	0.051	0.70	1.30
J	0.014	0.019	0.36	0.48
K	0.017	0.023	0.44	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R4)

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

MARKING: FULL PART NUMBER

R1 (10-August 2012)

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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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

http://www.centralsemi.com

Product End of Life Notification

PDN ID:	PDN01237
Notification Date:	7/27/22
Last Buy Date:	1/27/23
Last Shipment Date	7/27/23

Summary:The following items are discontinued and now considered End of Life (EOL).

Although Central Semiconductor Corp. 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
BCW31 BK	N/A
BCW31 TR	N/A
CMLT3474 BK	N/A
CMLT3474 TR	N/A
CMUD2836 BK	N/A
CMUD2836 TR	N/A
CMZ2361 BK	N/A
CMZ2361 TR	N/A
CXDM3069N BK	N/A
CXDM3069N 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.centralsemi.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 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.