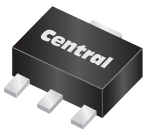
CXDM1002N

SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET



SOT-89 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXDM1002N is a high voltage silicon N-Channel enhancement-mode MOSFET designed for high speed pulsed amplifier and driver applications. This MOSFET offers high voltage, 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 $r_{DS(ON)}$ (140mΩ TYP @ V_{GS}=4.5V)
- High voltage (V_{DS}=100V)
- Logic level compatibility
- 2kV ESD protection

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	20	V
Continuous Drain Current (Steady State)	I_D	2.0	A
Maximum Pulsed Drain Current, tp=10μs	I_{DM}	7.0	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)

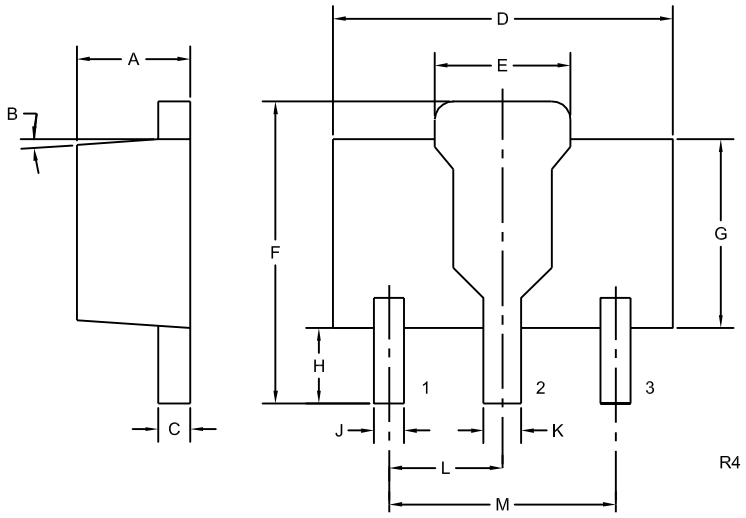
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=20V, V_{DS}=0			15	μA
I_{DSS}	V_{DS}=100V, V_{GS}=0			100	nA
BV_{DSS}	V_{GS}=0, I_D=250μA	100			V
$V_{GS(th)}$	V_{GS}=V_{DS}, I_D=250μA	1.5	2.1	2.5	V
V_{SD}	V_{GS}=0, I_S=1.0A			1.1	V
$r_{DS(ON)}$	V_{GS}=10V, I_D=2.0A		125	300	mΩ
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=1.0A		140	350	mΩ
C_{rss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		48		pF
C_{iss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		550		pF
C_{oss}	V_{DS}=25V, V_{GS}=0, f=1.0MHz		45		pF
$Q_{g(tot)}$	V_{DS}=80V, V_{GS}=5.0V, I_D=2.0A		6.0		nC
Q_{gs}	V_{DS}=80V, V_{GS}=5.0V, I_D=2.0A		1.2		nC
Q_{gd}	V_{DS}=80V, V_{GS}=5.0V, I_D=2.0A		3.0		nC
t_{on}	V_{DD}=50V, V_{GS}=5.0V, I_D=3.5A		32		ns
t_{off}	R_G=4.7Ω		50		ns

R2 (28-November 2017)

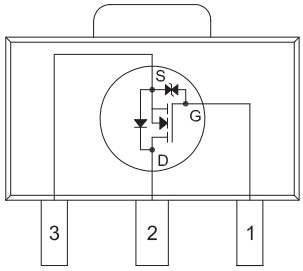
CXDM1002N

SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET

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

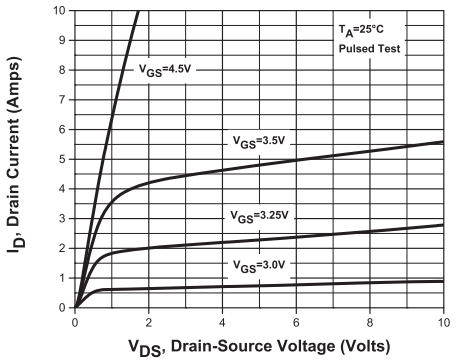
R2 (28-November 2017)

CXDM1002N

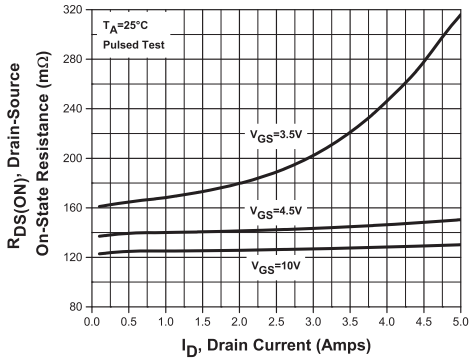
SURFACE MOUNT SILICON N-CHANNEL ENHANCEMENT-MODE MOSFET

TYPICAL ELECTRICAL CHARACTERISTICS

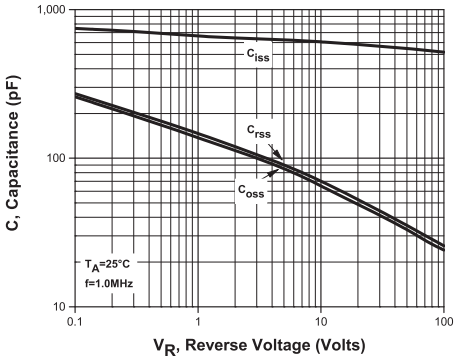
Output Characteristics



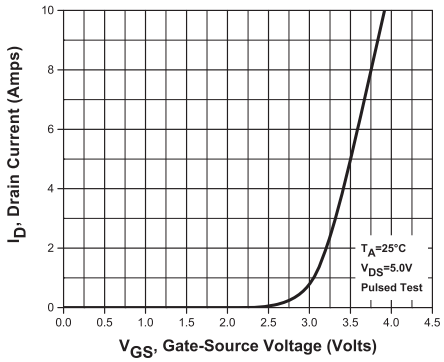
Drain Source On Resistance



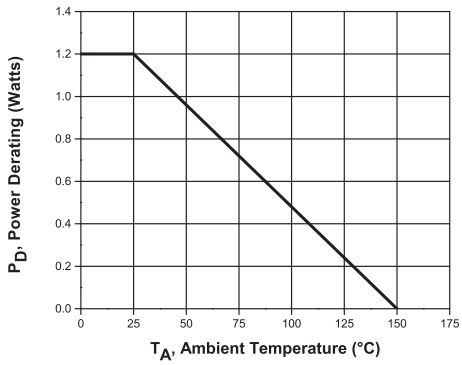
Capacitance



Transfer Characteristics



Power Derating



R2 (28-November 2017)

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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