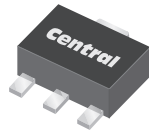


CXDM6053N

**SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET**



SOT-89 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXDM6053N 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 $r_{DS(ON)}$ (52mΩ MAX @ $V_{GS}=4.5V$)
- High current ($I_D=5.3A$)
- Logic level compatibility

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

Drain-Source Voltage
Gate-Source Voltage
Continuous Drain Current (Steady State)
Maximum Pulsed Drain Current, $t_p=10\mu s$
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_{DS}	60
V_{GS}	20
I_D	5.3
I_{DM}	30
P_D	1.2
T_J, T_{stg}	-55 to +150
θ_{JA}	104

UNITS

V
V
A
A
W
°C
°C/W

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSSF}, I_{GSSR}	$V_{GS}=20V, V_{DS}=0$			100	nA
I_{DSS}	$V_{DS}=60V, V_{GS}=0$			1.0	μA
BV_{DSS}	$V_{GS}=0, I_D=250\mu A$	60			V
$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=250\mu A$	1.0	1.3	3.0	V
V_{SD}	$V_{GS}=0, I_S=2.0A$			1.2	V
$r_{DS(ON)}$	$V_{GS}=10V, I_D=5.3A$		30	41	mΩ
$r_{DS(ON)}$	$V_{GS}=4.5V, I_D=4.7A$		33	52	mΩ
$Q_g(tot)$	$V_{DS}=30V, V_{GS}=5.0V, I_D=5.3A$		8.8		nC
Q_{gs}	$V_{DS}=30V, V_{GS}=5.0V, I_D=5.3A$		1.9		nC
Q_{gd}	$V_{DS}=30V, V_{GS}=5.0V, I_D=5.3A$		3.6		nC
C_{rss}	$V_{DS}=30V, V_{GS}=0, f=1.0MHz$		53		pF
C_{iss}	$V_{DS}=30V, V_{GS}=0, f=1.0MHz$		920		pF
C_{oss}	$V_{DS}=30V, V_{GS}=0, f=1.0MHz$		49		pF
t_{on}	$V_{DD}=30V, V_{GS}=4.5V, I_D=4.4A$ $R_G=1.0\Omega, R_L=6.8\Omega$		33		ns
t_{off}	$V_{DD}=30V, V_{GS}=4.5V, I_D=4.4A$ $R_G=1.0\Omega, R_L=6.8\Omega$		42		ns

R1 (9-August 2012)

CXDM6053N

SURFACE MOUNT

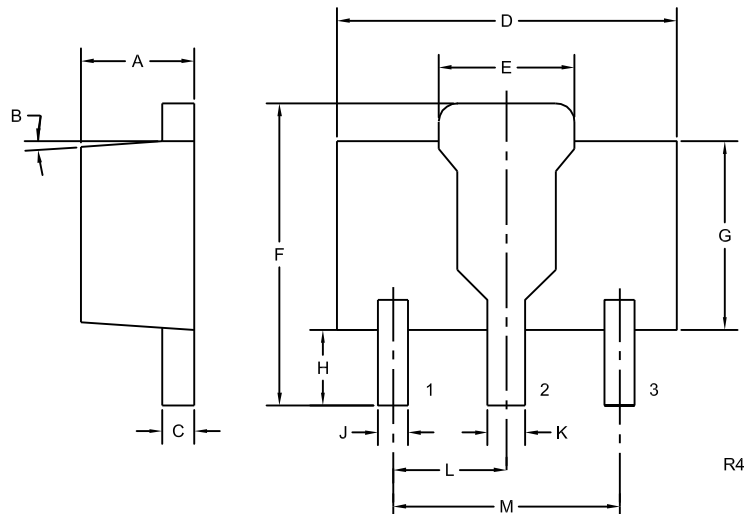
N-CHANNEL

ENHANCEMENT-MODE

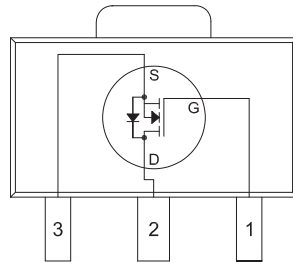
SILICON MOSFET



SOT-89 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



(Top View)

Tab is common to pin 2

LEAD CODE:

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

MARKING: FULL PART NUMBER

SYMBOL	INCHES		MILLIMETERS	
	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)

R1 (9-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).

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