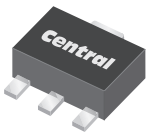
CXDM6053N

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



SOT-89 CASE

Central Semiconductor Corp.

www.centralsemi.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°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	20	V
Continuous Drain Current (Steady State)	I_D	5.3	A
Maximum Pulsed Drain Current, tp=10μs	I_{DM}	30	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			100	nA
I_{DSS}	V_{DS}=60V, V_{GS}=0			1.0	μA
BV_{DSS}	V_{GS}=0, I_D=250μA	60			V
$V_{GS(th)}$	V_{GS}=V_{DS}, I_D=250μA	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=1.0Ω, R_L=6.8Ω		33		ns
t_{off}	V_{DD}=30V, V_{GS}=4.5V, I_D=4.4A				
	R_G=1.0Ω, R_L=6.8Ω		42		ns

R1 (9-August 2012)

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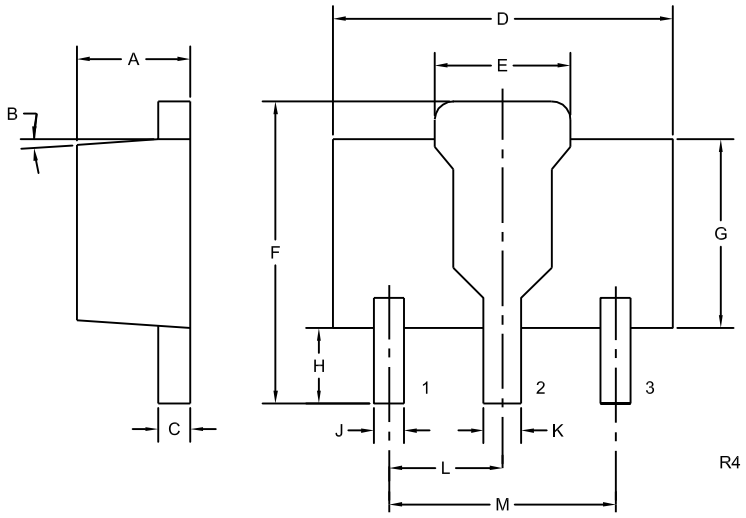
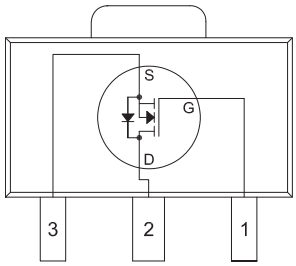
SOT-89 CASE - MECHANICAL OUTLINE



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

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