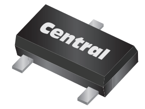
CMPDM303NH

SURFACE MOUNT
N-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



SOT-23F CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPDM303NH is a high current N-Channel enhancement-mode silicon MOSFET, manufactured by the N-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: 303C

APPLICATIONS:

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

FEATURES:

- Low $r_{DS(ON)}$ (0.078Ω MAX @ V_{GS}=2.5V)
- High current (I_D=3.6A)
- 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	3.6	A
Maximum Pulsed Drain Current, tp=10μs	I_{DM}	14.4	A
Power Dissipation	P_D	350	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-55 to +150	°C
Thermal Resistance	Θ_{JA}	357	°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			10	μA
I_{DSS}	V_{DS}=20V, 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	0.6		1.2	V
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=1.8A		0.033	0.04	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=1.8A		0.042	0.078	Ω
g_{FS}	V_{DS}=5.0V, I_D=3.6A		11.8		S
C_{rss}	V_{DS}=10V, V_{GS}=0, f=1.0MHz		55		pF
C_{iss}	V_{DS}=10V, V_{GS}=0, f=1.0MHz		590		pF
C_{oss}	V_{DS}=10V, V_{GS}=0, f=1.0MHz		50		pF
$Q_{g(tot)}$	V_{DD}=10V, V_{GS}=4.5V, I_D=3.6A		5.0	13	nC
Q_{gs}	V_{DD}=10V, V_{GS}=4.5V, I_D=3.6A		0.9	1.4	nC
Q_{gd}	V_{DD}=10V, V_{GS}=4.5V, I_D=3.6A		1.0	2.7	nC
t_{on}	V_{DD}=10V, V_{GS}=4.0V, I_D=3.6A, R_G=10Ω		15		ns
t_{off}	V_{DD}=10V, V_{GS}=4.0V, I_D=3.6A, R_G=10Ω		29		ns

R2 (11-December 2012)

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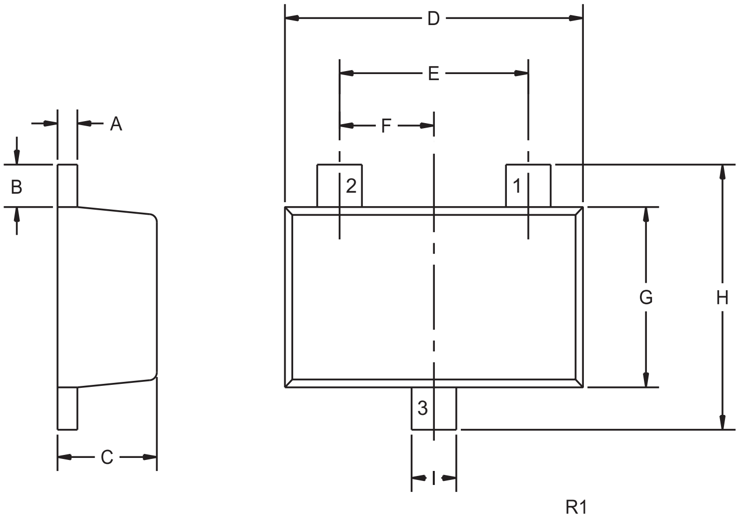
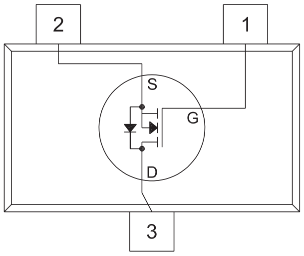
SOT-23F CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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

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