CMPDM302PH

SURFACE MOUNT
P-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET



SOT-23F CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPDM302PH is a High Current P-Channel Enhancement-mode Silicon MOSFET, manufactured by the P-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: 302C

APPLICATIONS:

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

FEATURES:

- Low $r_{DS(ON)}$ (0.129Ω MAX @ V_{GS}=2.5V)
- High current (I_D=2.4A)
- 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	2.4	A
Maximum Pulsed Drain Current, tp=10μs	I_{DM}	9.6	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)

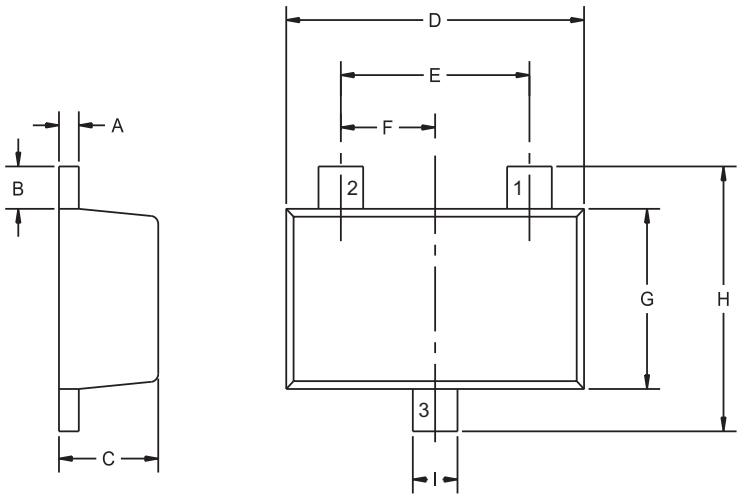
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{GSSF}, I_{GSSR}	V_{GS}=12V, V_{DS}=0			100	nA
I_{DSS}	V_{DS}=20V, V_{GS}=0			1.0	μA
BV_{DSS}	V_{GS}=0, I_D=250μA	30			V
$V_{GS(th)}$	V_{GS}=V_{DS}, I_D=250μA	0.7		1.4	V
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=1.2A		0.061	0.091	Ω
$r_{DS(ON)}$	V_{GS}=2.5V, I_D=1.2A		0.086	0.129	Ω
g_{FS}	V_{DS}=5.0V, I_D=2.4A		13.2		S
C_{rss}	V_{DS}=10V, V_{GS}=0, f=1.0MHz		46		pF
C_{iss}	V_{DS}=10V, V_{GS}=0, f=1.0MHz		398		pF
C_{oss}	V_{DS}=10V, V_{GS}=0, f=1.0MHz		82		pF
$Q_{g(tot)}$	V_{DD}=10V, V_{GS}=5.0V, I_D=2.4A		6.4	9.6	nC
Q_{gs}	V_{DD}=10V, V_{GS}=5.0V, I_D=2.4A		2.8	4.2	nC
Q_{gd}	V_{DD}=10V, V_{GS}=5.0V, I_D=2.4A		1.7	2.6	nC
t_{on}	V_{DD}=10V, I_D=2.4A, R_G=10Ω		16.3		ns
t_{off}	V_{DD}=10V, I_D=2.4A, R_G=10Ω		12.9		ns

R0 (21-October 2010)

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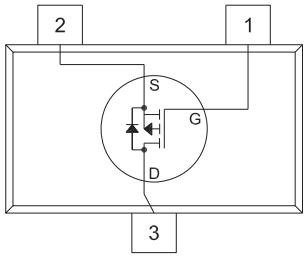
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SOT-23F CASE - MECHANICAL OUTLINE



R1

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

MARKING CODE: 302C