

CWDM609P8N
SURFACE MOUNT SILICON
N-CHANNEL
ENHANCEMENT-MODE
MOSFET



www.centrasemi.com



SOIC-8 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CWDM608P8N is a high current silicon N-Channel enhancement-mode MOSFET designed for high speed pulsed amplifier and driver applications. This energy efficient MOSFET offers beneficially low $r_{DS(ON)}$, and low threshold voltage.

MARKING CODE: 609P8N

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

Drain-Source Voltage	
Gate-Source Voltage	
Continuous Drain Current	
Operating and Storage Junction Temperature	
Power Dissipation	

SYMBOL		UNITS
V_{DS}	60	V
V_{GS}	20	V
I_D	9.8	A
T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
P_D	2.5	W

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

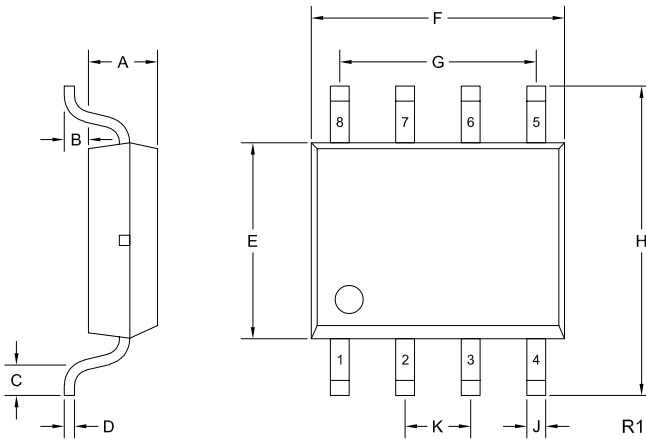
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSSF}, I_{GSSR}	$V_{GS}=20\text{V}, V_{DS}=0$			100	nA
I_{DSS}	$V_{DS}=60\text{V}, V_{GS}=0$			1.0	μA
BV_{DSS}	$V_{GS}=0, I_D=250\mu\text{A}$	60			V
$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=250\mu\text{A}$	2.0	2.82	4.1	V
V_{SD}	$V_{GS}=0, I_S=1.0\text{A}$			1.6	V
$r_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=1.0\text{A}$		15	17	m Ω
C_{iss}	$V_{DS}=60\text{V}, V_{GS}=0$		3.0		nF
C_{oss}	$V_{DS}=60\text{V}, V_{GS}=0$		0.23		nF
C_{rss}	$V_{DS}=60\text{V}, V_{GS}=0$		0.12		nF
$t_{d(on)}$	$V_{DS}=60\text{V}, V_{GS}=10\text{V}, R_{DL}=60\Omega$		7.2		ns
t_r	$V_{DS}=60\text{V}, V_{GS}=10\text{V}, R_{DL}=60\Omega$		4.5		ns
$t_{d(off)}$	$V_{DS}=60\text{V}, V_{GS}=10\text{V}, R_{DL}=60\Omega$		33		ns
t_f	$V_{DS}=60\text{V}, V_{GS}=10\text{V}, R_{DL}=60\Omega$		44		ns

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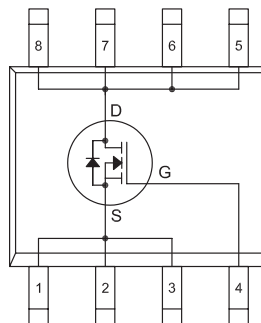
SOIC-8 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.061	1.392	1.554
B	0.004	0.009	0.100	0.224
C	0.016	0.035	0.40	0.90
D	0.007	0.010	0.19	0.25
E	0.145	0.157	3.80	4.00
F	0.189	0.198	4.80	5.00
G	0.150		3.81	
H	0.228	0.244	5.80	6.20
J	0.013	0.020	0.33	0.51
K	0.050		1.27	

SOIC-8 (REV: R1)

PIN CONFIGURATION

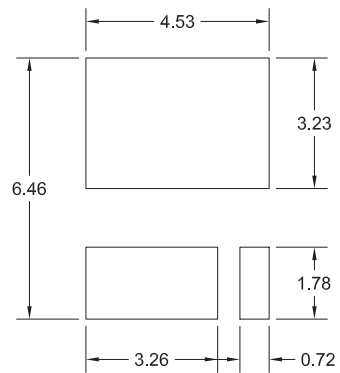


LEAD CODE:

- 1) Source 5) Drain
- 2) Source 6) Drain
- 3) Source 7) Drain
- 4) Gate 8) Drain

MARKING CODE: 609P8N

SUGGESTED MOUNTING PADS
(Dimensions in mm)



R0

R1 (7-August 2023)

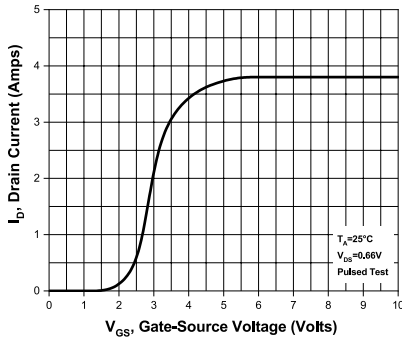
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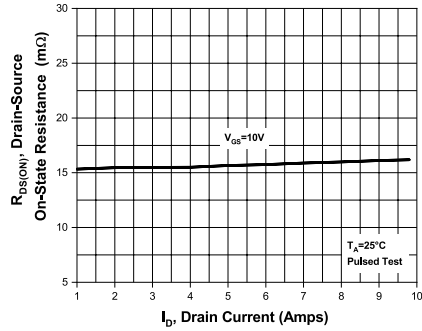


TYPICAL ELECTRICAL CHARACTERISTICS

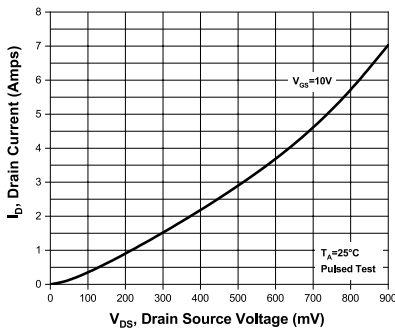
Transfer Characteristics



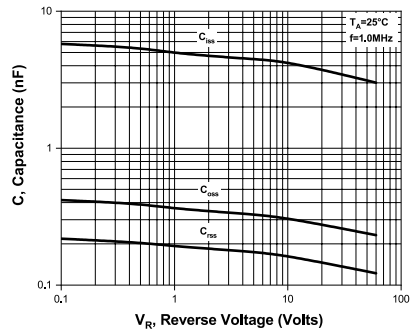
Drain Source On Resistance



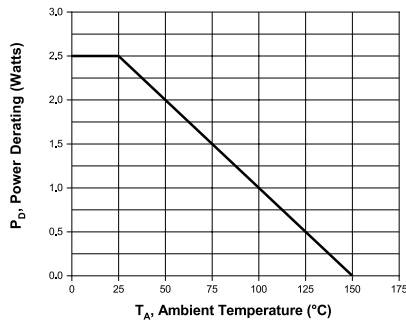
Typical Output Characteristics



Capacitance



Power Derating



R1 (7-August 2023)

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

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

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