CWDM3011P

SURFACE MOUNT SILICON P-CHANNEL ENHANCEMENT-MODE MOSFET

SOIC-8 CASE

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CWDM3011P is a high current silicon P-Channel enhancement-mode MOSFET designed for high speed pulsed amplifier and driver applications. This MOSFET has high current capability with beneficially low $r_{DS(ON)}$, and low gate charge.

MARKING CODE: C3011P

APPLICATIONS:

- Load/Power switches
- DC-DC converter circuits
- Power management

FEATURES:

- Low $r_{DS(ON)}$
- High current
- Low gate charge

MAXIMUM RATINGS: (T_A=25°C)	**SYMBOL**		**UNITS**
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	20	V
Continuous Drain Current (Steady State)	I_D	11	A
Maximum Pulsed Drain Current, tp=10μs	I_{DM}	50	A
Power Dissipation	P_D	2.5	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-55 to +150	°C
Thermal Resistance	Θ_{JA}	50	°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}=30V, 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	1.0	1.4	3.0	V
V_{SD}	V_{GS}=0, I_S=2.6A			1.3	V
$r_{DS(ON)}$	V_{GS}=10V, I_D=11A		12	20	mΩ
$r_{DS(ON)}$	V_{GS}=4.5V, I_D=8.5A		15	30	mΩ
C_{rss}	V_{DS}=8.0V, V_{GS}=0, f=1.0MHz		450		pF
C_{iss}	V_{DS}=8.0V, V_{GS}=0, f=1.0MHz		3100		pF
C_{oss}	V_{DS}=8.0V, V_{GS}=0, f=1.0MHz		320		pF
$Q_{g(tot)}$	V_{DD}=15V, V_{GS}=10V, I_D=11A		80		nC
Q_{gs}	V_{DD}=15V, V_{GS}=10V, I_D=11A		7.0		nC
Q_{gd}	V_{DD}=15V, V_{GS}=10V, I_D=11A		10.1		nC
t_{on}	V_{DD}=15V, V_{GS}=10V, I_D=1.0A		49		ns
t_{off}	R_G=6.0Ω, R_L=15Ω		330		ns

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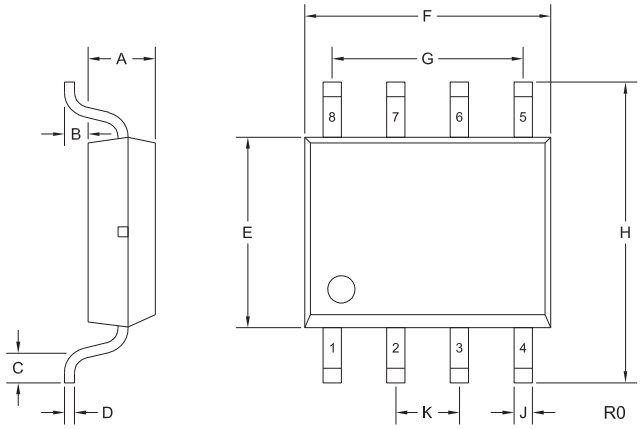
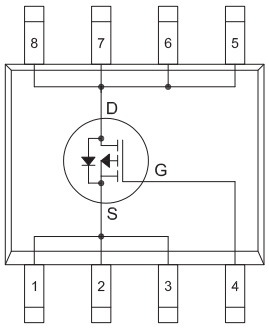
SOIC-8 CASE - MECHANICAL OUTLINE



DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.049	0.057	1.24	1.44
B	0.000	0.011	0.00	0.27
C	0.018	-	0.46	-
D	0.006	0.011	0.16	0.27
E	0.145	0.154	3.70	3.90
F	0.189	0.198	4.81	5.01
G	0.150		3.81	
H	0.231	0.244	5.88	6.18
J	0.013	0.021	0.35	0.52
K	0.050		1.27	

SOIC-8 (REV: R0)

PIN CONFIGURATION



LEAD CODE:

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

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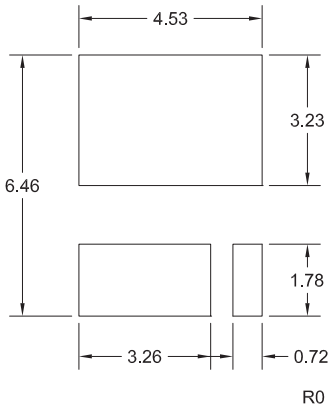
SUGGESTED MOUNTING PADS

(Dimensions in mm)



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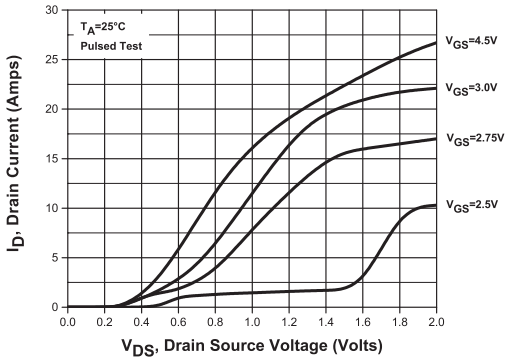
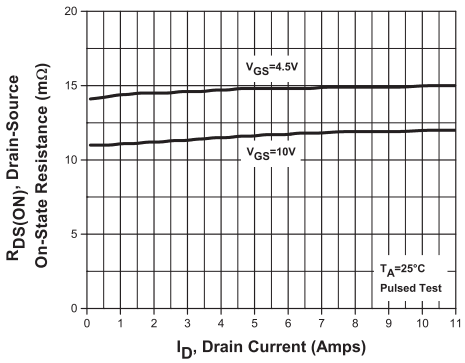
TYPICAL ELECTRICAL CHARACTERISTICS

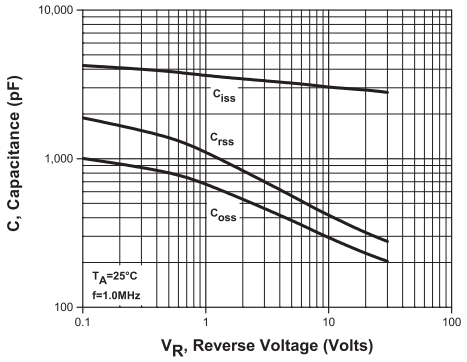
Output Characteristics



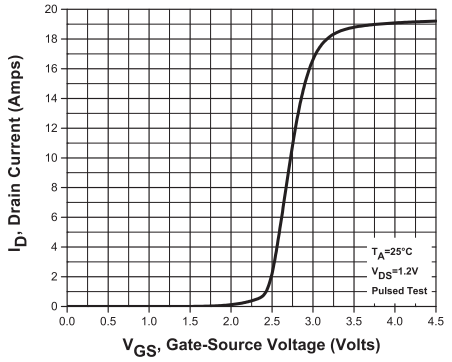
Drain Source On Resistance



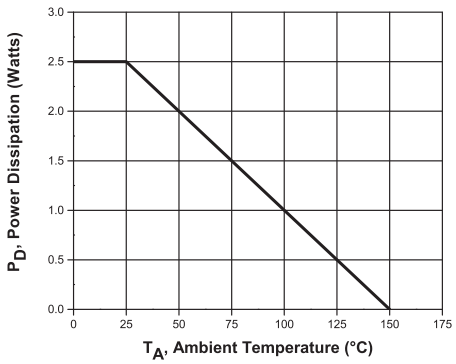
Capacitance



Transfer Characteristics



Power Derating



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