

CWDM305PD**SURFACE MOUNT
DUAL P-CHANNEL
ENHANCEMENT-MODE
SILICON MOSFET****SOIC-8 CASE**www.centrasemi.com**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CWDM305PD is a dual 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 gate charge.

MARKING CODE: C503**APPLICATIONS:**

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

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

Drain-Source Voltage
Gate-Source Voltage
Continuous Drain Current (Steady State)
Maximum Pulsed Drain Current, $t_p=10\mu\text{s}$
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_{DS}	30	V
V_{GS}	16	V
I_D	5.3	A
I_{DM}	21.2	A
P_D	2.0	W
T_J, T_{stg}	-55 to +150	$^\circ\text{C}$
θ_{JA}	62.5	$^\circ\text{C/W}$

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

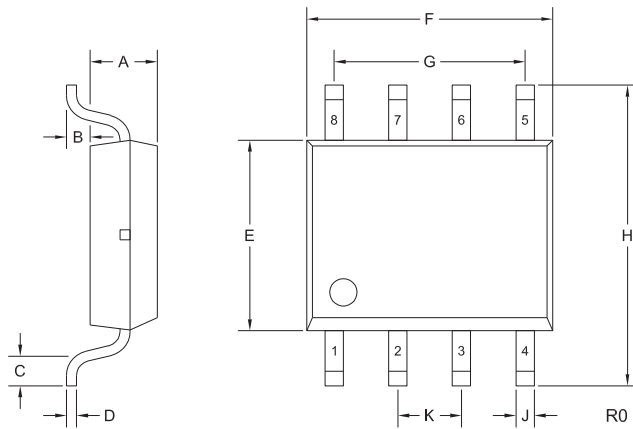
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{GSS}, I_{GSSR}	$V_{GS}=20\text{V}, V_{DS}=0$			100	nA
I_{DSS}	$V_{DS}=30\text{V}, V_{GS}=0$			1.0	μA
BV_{DSS}	$V_{GS}=0, I_D=250\mu\text{A}$	30			V
$V_{GS(th)}$	$V_{GS}=V_{DS}, I_D=250\mu\text{A}$	1.0		3.0	V
$r_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=2.7\text{A}$		0.066	0.072	Ω
$r_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=2.7\text{A}$		0.077	0.083	Ω
g_{FS}	$V_{DS}=5.0\text{V}, I_D=5.3\text{A}$		11		S
C_{rss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1.0\text{MHz}$		50	60	pF
C_{iss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1.0\text{MHz}$		500	590	pF
C_{oss}	$V_{DS}=10\text{V}, V_{GS}=0, f=1.0\text{MHz}$		60	150	pF
$Q_{g(tot)}$	$V_{DD}=15\text{V}, V_{GS}=5.0\text{V}, I_D=5.3\text{A}$		4.7	7.0	nC
Q_{gs}	$V_{DD}=15\text{V}, V_{GS}=5.0\text{V}, I_D=5.3\text{A}$		1.4	2.1	nC
Q_{gd}	$V_{DD}=15\text{V}, V_{GS}=5.0\text{V}, I_D=5.3\text{A}$		1.7	2.5	nC
t_{on}	$V_{DD}=15\text{V}, I_D=5.3\text{A}, R_G=10\Omega$		7.0		ns
t_{off}	$V_{DD}=15\text{V}, I_D=5.3\text{A}, R_G=10\Omega$		8.0		ns

R2 (23-August 2012)

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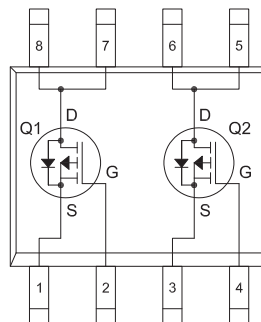
SOIC-8 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	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



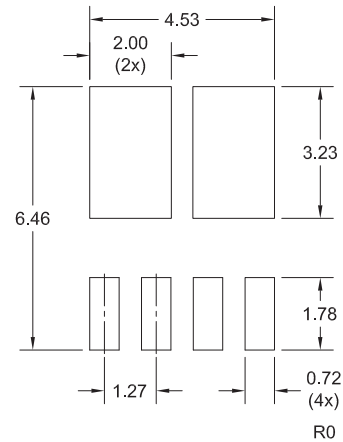
LEAD CODE:

- | | |
|--------------|-------------|
| 1) Source Q1 | 5) Drain Q2 |
| 2) Gate Q1 | 6) Drain Q2 |
| 3) Source Q2 | 7) Drain Q1 |
| 4) Gate Q2 | 8) Drain Q1 |

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SUGGESTED MOUNTING PADS

(Dimensions in mm)



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Mouser Electronics

Authorized Distributor

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[CWDM305PD TR13](#)