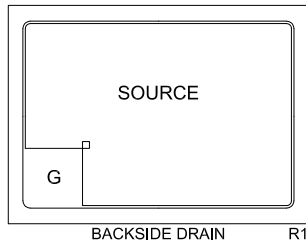


The CP776-CWDM305P is a silicon P-Channel MOSFET designed for high speed pulsed amplifier and driver applications.



**MECHANICAL SPECIFICATIONS:**

Die Size	33 x 24 MILS
Die Thickness	7.0 MILS
Gate Bonding Pad Size	6.5 x 6.5 MILS
Source Bonding Pad Size	30 x 20 MILS
Top Side Metalization	Al – 40,000Å
Back Side Metalization	Ti/Ni/Ag – 1,000Å/3,000Å/10,000Å
Scribe Alley Width	2.36 MILS
Wafer Diameter	8 INCHES
Gross Die Per Wafer	57,000

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

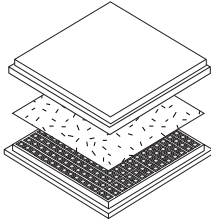
	SYMBOL		UNITS
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	16	V
Continuous Drain Current (Steady State)	$I_D$	5.3	A
Maximum Pulsed Drain Current, $t_p=10\mu\text{s}$	$I_{DM}$	21.2	A
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$

**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
$I_{DSS}$	$V_{DS}=30\text{V}, V_{GS}=0$			1.0	$\mu\text{A}$
$BV_{DSS}$	$V_{GS}=0, I_D=250\mu\text{A}$	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	$\Omega$
$r_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=2.7\text{A}$		0.077	0.083	$\Omega$
$g_{FS}$	$V_{DS}=5.0\text{V}, I_D=5.3\text{A}$		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

## BARE DIE PACKING OPTIONS

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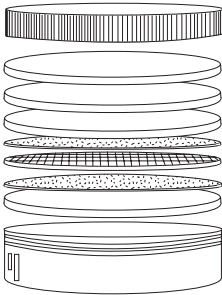


### BARE DIE IN TRAY (WAFFLE) PACK

**CT:** Singulated die in tray (waffle) pack.  
(example: CP211-PART NUMBER-CT)

**CM:** Singulated die in tray (waffle) pack 100% visually inspected as per MIL-STD-750, (method 2072 transistors, method 2073 diodes).  
(example: CP211-PART NUMBER-CM)

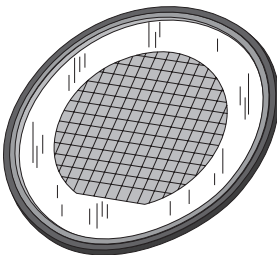
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### UNSAWN WAFER

**WN:** Full wafer, unsawn, 100% tested with reject die inked.  
(example: CP211-PART NUMBER-WN)

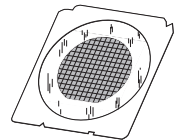
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### SAWN WAFER ON PLASTIC RING

**WR:** Full wafer, sawn and mounted on plastic ring,  
100% tested with reject die inked.  
(example: CP211-PART NUMBER-WR)

Please note: Sawn Wafer on Metal Frame (WS) is possible as a special order. Please contact your Central Sales Representative at 631-435-1110.



Visit the Central website for a complete listing of specifications:  
[www.centrasemi.com/bdspecs](http://www.centrasemi.com/bdspecs)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

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**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

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