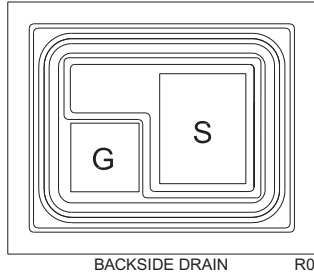


CP764X-CMPDM8002

P-Channel MOSFET Die

Enhancement-Mode

The CP764X-CMPDM8002 is a silicon P-Channel MOSFET designed for high speed pulsed amplifier and driver applications.



MECHANICAL SPECIFICATIONS:

Die Size	21.7 x 17.7 MILS
Die Thickness	5.5 MILS
Gate Bonding Pad Size	4.7 x 4.7 MILS
Source Bonding Pad Size	6.1 x 7.9 MILS
Top Side Metalization	Al-Si – 35,000Å
Back Side Metalization	Au – 9,000Å
Scribe Alley Width	2.76 MILS
Wafer Diameter	6 INCHES
Gross Die Per Wafer	62,600

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

	SYMBOL		UNITS
Drain-Source Voltage	V_{DS}	50	V
Drain-Gate Voltage	V_{DG}	50	V
Gate-Source Voltage	V_{GS}	20	V
Continuous Drain Current	I_D	280	mA
Continuous Source Current (Body Diode)	I_S	280	mA
Maximum Pulsed Drain Current	I_{DM}	1.5	A
Maximum Pulsed Source Current	I_{SM}	1.5	A
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{GSSF}, I_{GSSR}	$V_{GS}=20\text{V}, V_{DS}=0$		100	nA
I_{DSS}	$V_{DS}=50\text{V}, V_{GS}=0$		1.0	μA
$I_{D(ON)}$	$V_{GS}=10\text{V}, V_{DS}=10\text{V}$	500		mA
BV_{DSS}	$V_{GS}=0, I_D=10\mu\text{A}$	50		V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1.0	2.5	V
$V_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=500\text{mA}$		1.5	V
$V_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=50\text{mA}$		0.15	V
V_{SD}	$V_{GS}=0, I_S=115\text{mA}$		1.3	V
$r_{DS(ON)}$	$V_{GS}=10\text{V}, I_D=500\text{mA}$		2.5	Ω
$r_{DS(ON)}$	$V_{GS}=5.0\text{V}, I_D=50\text{mA}$		3.0	Ω
g_{FS}	$V_{DS}=10\text{V}, I_D=200\text{mA}$	200		mS
C_{rss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		7.0	pF
C_{iss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		70	pF
C_{oss}	$V_{DS}=25\text{V}, V_{GS}=0, f=1.0\text{MHz}$		15	pF

R0 (5-August 2016)

CP764X-CMPDM8002

P-Channel MOSFET Die

Enhancement-Mode



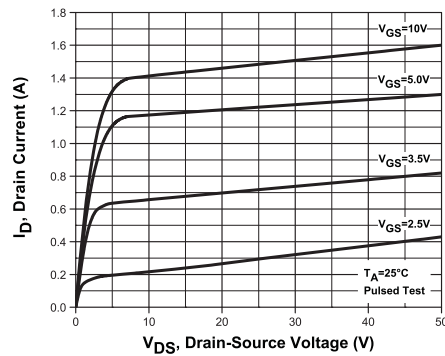
ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
$Q_{g(\text{tot})}$	$V_{DS}=25\text{V}$, $V_{GS}=4.5\text{V}$, $I_D=100\text{mA}$	0.72		nC
Q_{gs}	$V_{DS}=25\text{V}$, $V_{GS}=4.5\text{V}$, $I_D=100\text{mA}$	0.25		nC
Q_{gd}	$V_{DS}=25\text{V}$, $V_{GS}=4.5\text{V}$, $I_D=100\text{mA}$	0.16		nC
t_{on} , t_{off}	$V_{DD}=30\text{V}$, $V_{GS}=10\text{V}$, $I_D=200\text{mA}$, $R_G=25\Omega$, $R_L=150\Omega$		20	ns

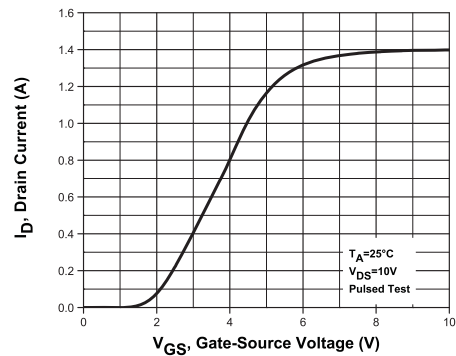
CP764X-CMPDM8002

Typical Electrical Characteristics

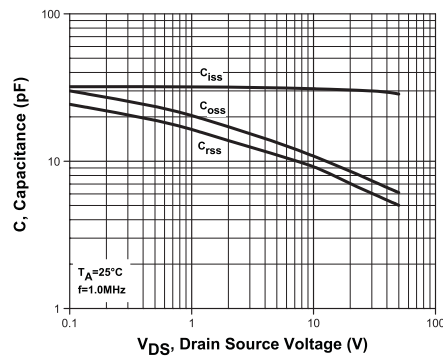
Output Characteristics



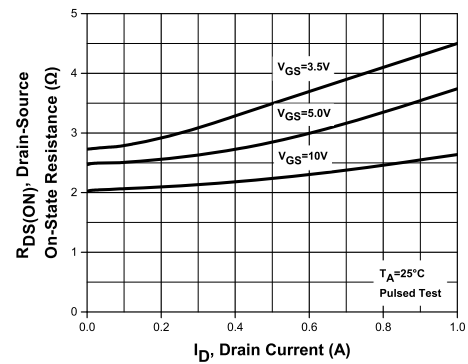
Transfer Characteristics



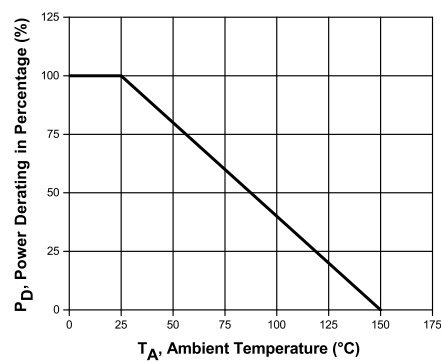
Capacitance



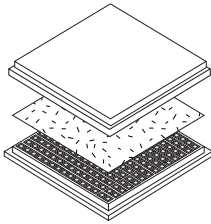
Drain Source On Resistance



Normalized Power Derating



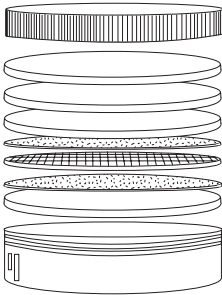
BARE DIE PACKING OPTIONS



BARE DIE IN TRAY (WAFFLE) PACK

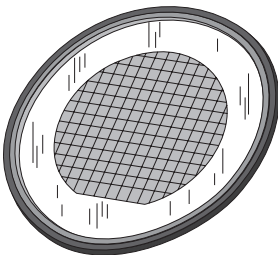
CT: Singulated die in tray (waffle) pack.
(example: CP211-PART NUMBER-CT)

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)



UNSAWN WAFER

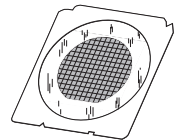
WN: Full wafer, unsawn, 100% tested with reject die inked.
(example: CP211-PART NUMBER-WN)



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

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).

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