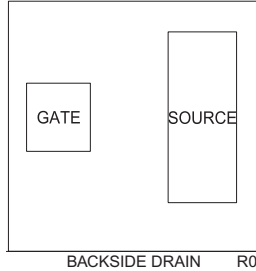


The CP324X-2N7002 is a silicon N-Channel MOSFET designed for high speed pulsed amplifier and driver applications.



MECHANICAL SPECIFICATIONS:

Die Size	21.65 x 21.65 MILS
Die Thickness	5.9 MILS
Gate Bonding Pad Size	5.5 x 5.5 MILS
Source Bonding Pad Size	5.9 x 13.8MILS
Top Side Metalization	Al – 30,000Å
Back Side Metalization	Au – 12,000Å
Scribe Alley Width	1.97 MILS
Wafer Diameter	6 INCHES
Gross Die Per Wafer	48,613

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

	SYMBOL		UNITS
Drain-Source Voltage	V_{DS}	60	V
Drain-Gate Voltage	V_{DG}	60	V
Gate-Source Voltage	V_{GS}	40	V
Continuous Drain Current	I_D	115	mA
Continuous Source Current (Body Diode)	I_S	115	mA
Maximum Pulsed Drain Current	I_{DM}	800	mA
Maximum Pulsed Source Current	I_{SM}	800	mA
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}	$V_{GS}=20V, V_{DS}=0$		100	nA
I_{DSS}	$V_{DS}=60V, V_{GS}=0$		1.0	μA
$I_{D(ON)}$	$V_{GS}=10V, V_{DS}=10V$	500		mA
BV_{DSS}	$V_{GS}=0, I_D=10\mu\text{A}$	60		V
$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	1.0	2.5	V
$V_{DS(ON)}$	$V_{GS}=10V, I_D=500\text{mA}$		3.75	V
$V_{DS(ON)}$	$V_{GS}=5.0V, I_D=50\text{mA}$		0.375	V
V_{SD}	$V_{GS}=0, I_S=11.5\text{mA}$		1.5	V
$r_{DS(ON)}$	$V_{GS}=10V, I_D=500\text{mA}$		7.5	Ω
$r_{DS(ON)}$	$V_{GS}=5.0V, I_D=50\text{mA}$		7.5	Ω
g_{FS}	$V_{DS}=10V, I_D=200\text{mA}$	80		mS
C_{rss}	$V_{DS}=25V, V_{GS}=0, f=1.0\text{MHz}$		5.0	pF
C_{iss}	$V_{DS}=25V, V_{GS}=0, f=1.0\text{MHz}$		50	pF
C_{oss}	$V_{DS}=25V, V_{GS}=0, f=1.0\text{MHz}$		25	pF

CP324X-2N7002

N-Channel MOSFET Die

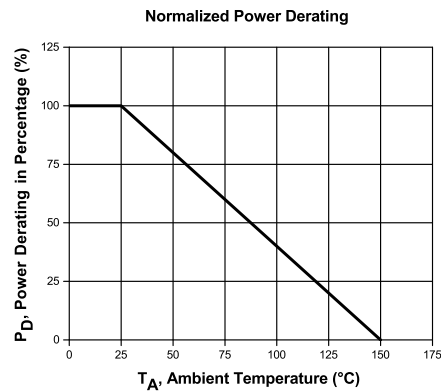
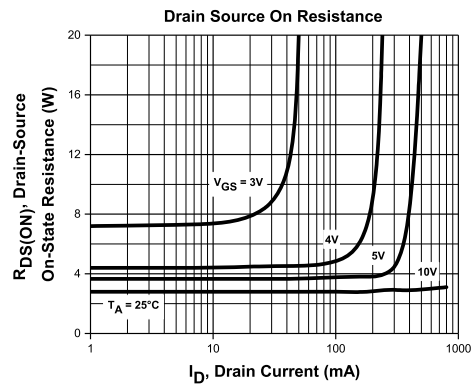
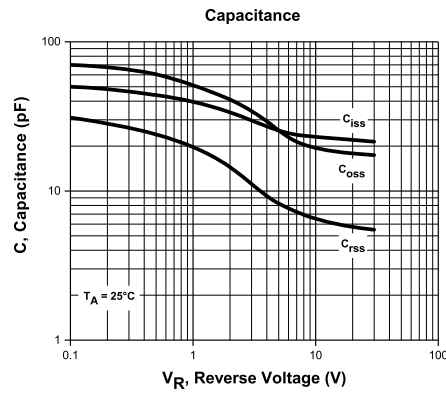
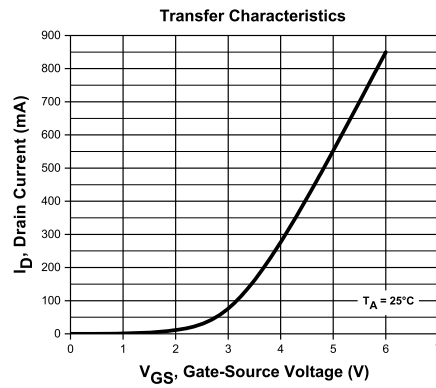
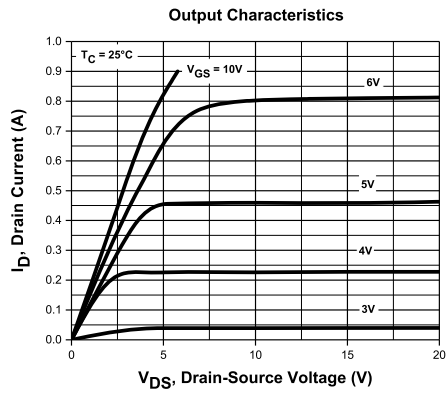
Enhancement-Mode

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

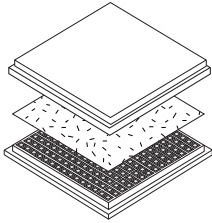
SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
$Q_{g(\text{tot})}$	$V_{DS}=30\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$	0.592		nC
Q_{gs}	$V_{DS}=30\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$	0.196		nC
Q_{gd}	$V_{DS}=30\text{V}, V_{GS}=4.5\text{V}, I_D=100\text{mA}$	0.148		nC
t_{on}	$V_{DD}=30\text{V}, I_D=200\text{mA}, R_G=25\Omega, R_L=150\Omega$		20	ns
t_{off}	$V_{DD}=30\text{V}, I_D=200\text{mA}, R_G=25\Omega, R_L=150\Omega$		20	ns

CP324X-2N7002

Typical Electrical Characteristics



BARE DIE PACKING OPTIONS



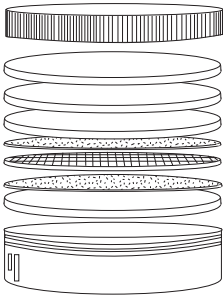
BARE DIE IN TRAY (WAFFLE) PACK

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).

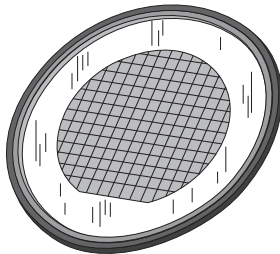
(example: CP211-PART NUMBER-CM)



UNSAWN WAFER

WN: Full wafer, unsawn, 100% tested with reject die inked.

(example: CP211-PART NUMBER-WN)

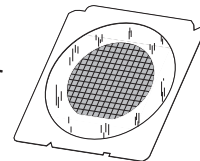


SAWN WAFER ON PLASTIC RING

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.



R1 (10-February 2017)

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

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