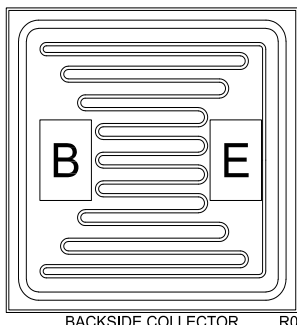


# CP322-CZT3120

NPN - Power Transistor Die  
3.0 Amp, 70 Volt

The CP322-CZT3120 die is a silicon power transistor designed for both power and high-speed switching applications.



## MECHANICAL SPECIFICATIONS:

Die Size	66.9 x 66.9 MILS
Die Thickness	9.05 MILS
Base Bonding Pad Size	11.8 x 17.7 MILS
Emitter Bonding Pad Size	11.8 x 17.7 MILS
Top Side Metalization	Al - 26,000Å
Back Side Metalization	Ti - 2,200Å Ni - 6,300Å Ag - 11,300Å
Scribe Alley Width	1.97 MILS
Wafer Diameter	5 INCHES
Gross Die Per Wafer	3,620

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

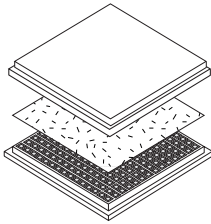
	SYMBOL		UNITS
Collector-Base Voltage	$V_{CBO}$	120	V
Collector-Emitter Voltage	$V_{CEO}$	70	V
Emitter-Base Voltage	$V_{EBO}$	7.0	V
Continuous Collector Current	$I_C$	3.0	A
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^{\circ}\text{C}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=80\text{V}$			1.0	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=5.0\text{V}$			1.0	$\mu\text{A}$
$BV_{CBO}$	$I_C=50\mu\text{A}$	120	160		V
$BV_{CEO}$	$I_C=10\text{mA}$	70	90		V
$BV_{EBO}$	$I_E=50\mu\text{A}$	7.0	15		V
$V_{CE(SAT)}$	$I_C=2.0\mu\text{A}, I_B=200\text{mA}$		250	500	mV
$V_{BE(ON)}$	$V_{CE}=1.0\text{V}, I_C=2.0\text{A}$		0.95	1.1	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	100	170		
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	100	165	300	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=3.0\text{A}$	40	75		
$f_T$	$V_{CE}=10\text{V}, I_C=500\text{mA}, f=1.0\text{MHz}$	8.0			MHz

## BARE DIE PACKING OPTIONS

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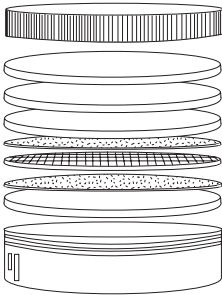


### BARE DIE IN TRAY (WAFFLE) PACK

**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)

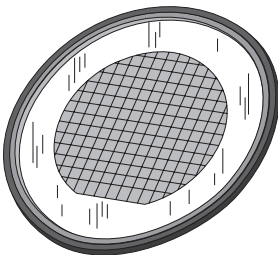
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### UNSAWN WAFER

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

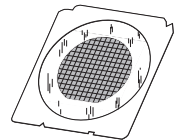
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### SAWN WAFER ON PLASTIC RING

**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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