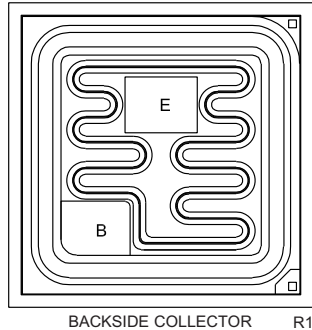


# CP591X-2N2907A

## PNP - General Purpose Transistor Die

### 0.6 Amp, 60 Volt

The CP591X-2N2907A is a silicon PNP transistor designed for general purpose applications.



#### MECHANICAL SPECIFICATIONS:

Die Size	19.3 x 19.3 MILS
Die Thickness	5.9 MILS
Base Bonding Pad Size	3.5 x 4.3 MILS
Emitter Bonding Pad Size	3.5 x 4.5 MILS
Top Side Metalization	Al – 13,000Å
Back Side Metalization	Au – 9,000Å
Scribe Alley Width	1.75 MILS
Wafer Diameter	5 INCHES
Gross Die Per Wafer	45,900

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

	SYMBOL		UNITS
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	60	V
Emitter-Base Voltage	$V_{EBO}$	5.0	V
Continuous Collector Current	$I_C$	600	mA
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$

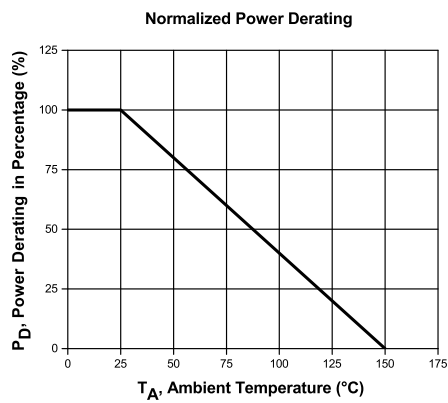
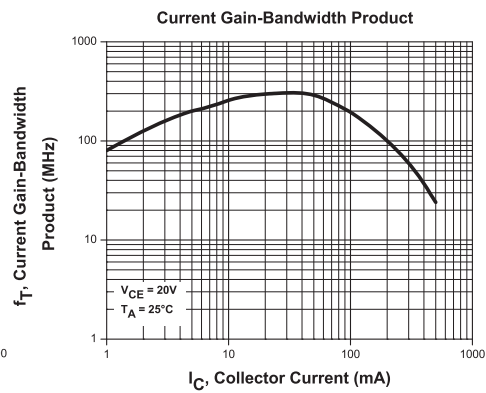
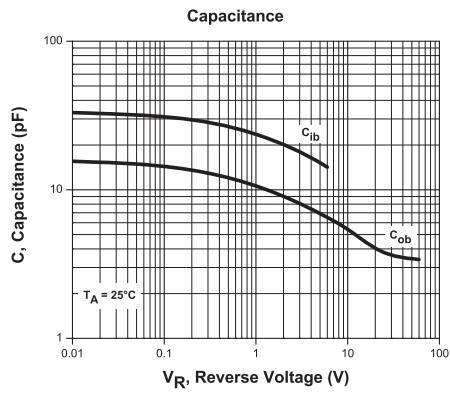
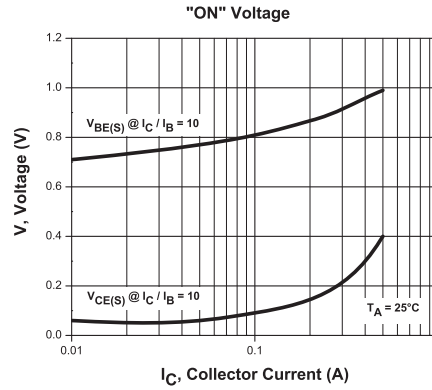
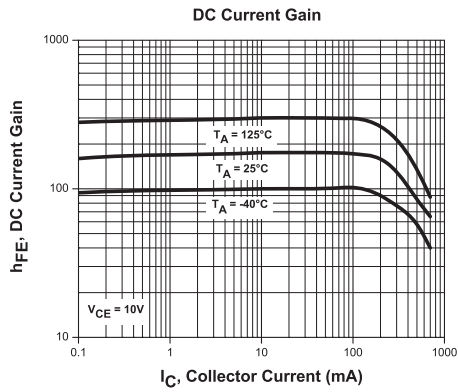
#### ELECTRICAL CHARACTERISTICS: ( $T_A=25^\circ\text{C}$ )

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=50\text{V}$		10	nA
$I_{CEV}$	$V_{CE}=30\text{V}, V_{EB}=0.5\text{V}$		50	nA
$BV_{CBO}$	$I_C=10\mu\text{A}$	60		V
$BV_{CEO}$	$I_C=10\text{mA}$	60		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.4	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1.6	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.3	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		2.6	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	75		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	100		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	100		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100	300	
$h_{FE}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	50		
$f_T$	$V_{CE}=20\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	200		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		8.0	pF
$C_{ib}$	$V_{EB}=2.0\text{V}, I_C=0, f=1.0\text{MHz}$		30	pF
$t_{on}$	$V_{CC}=30\text{V}, I_C=150\text{mA}, I_{B1}=15\text{mA}$		45	ns
$t_{off}$	$V_{CC}=6.0\text{V}, I_C=150\text{mA}, I_{B1}=I_{B2}=15\text{mA}$		100	ns

R1 (22-June 2016)

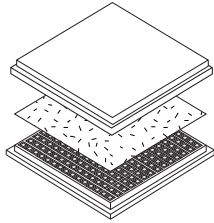
# CP591X-2N2907A

## Typical Electrical Characteristics



## BARE DIE PACKING OPTIONS

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### BARE DIE IN TRAY (WAFFLE) PACK

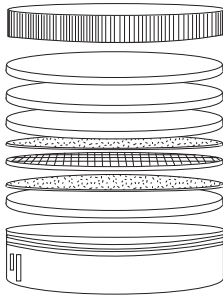
**CT:** Singulated die in tray (waffle) pack.

(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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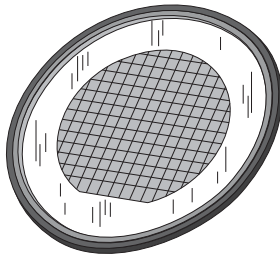


### UNSAWN WAFER

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

(example: CP211-PART NUMBER-WN)

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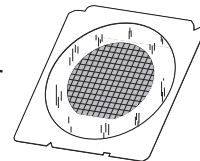


### SAWN WAFER ON PLASTIC RING

**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.



R1 (10-February 2017)

## 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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### CONTACT US

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