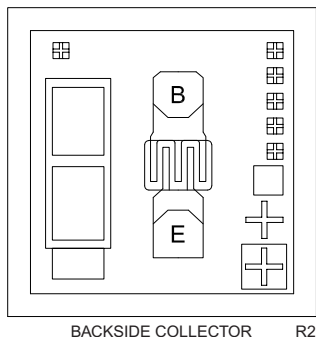


# CP317X-2N2857

## NPN - RF Transistor Die

### 40mA, 15 Volt

The CP317X-2N2857 is a silicon NPN RF transistor designed for low noise, high frequency amplifier and high output oscillator applications.



#### MECHANICAL SPECIFICATIONS:

Die Size	14.57 x 14.57 MILS
Die Thickness	5.9 MILS
Base Bonding Pad Size	2.4 x 2.2 MILS
Emitter Bonding Pad Size	2.4 x 2.2 MILS
Top Side Metalization	Al-Si – 12,000Å
Back Side Metalization	Au-As – 9,000Å
Scribe Alley Width	2.3 MILS
Wafer Diameter	5 INCHES
Gross Die Per Wafer	81,751

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

Collector-Base Voltage

Collector-Emitter Voltage

Emitter-Base Voltage

Continuous Collector Current

Operating and Storage Junction Temperature

#### SYMBOL

$V_{CBO}$

$V_{CEO}$

$V_{EBO}$

$I_C$

$T_J, T_{stg}$

30

15

2.5

40

-65 to +150

#### UNITS

V

V

V

mA

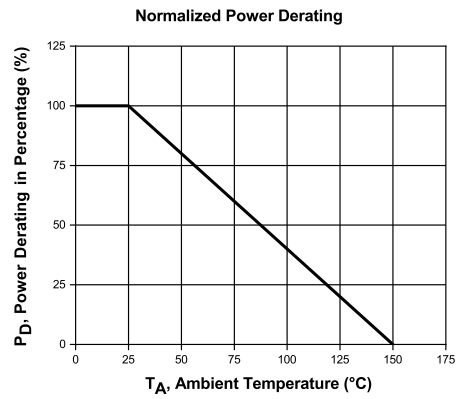
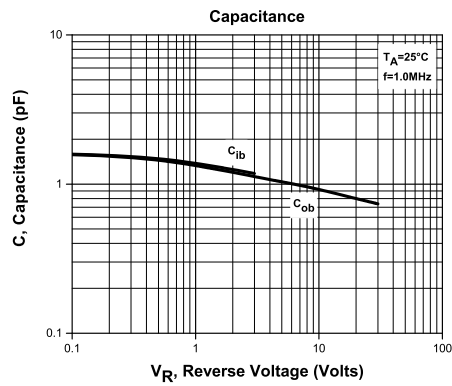
$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=15\text{V}$		10	nA
$BV_{CBO}$	$I_C=1.0\mu\text{A}$	30		V
$BV_{CEO}$	$I_C=3.0\text{mA}$	15		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	2.5		V
$h_{FE}$	$V_{CE}=1.0\text{V}, I_C=3.0\text{mA}$	30	150	
$f_T$	$V_{CE}=6.0\text{V}, I_C=5.0\text{mA}, f=100\text{MHz}$	1.0	1.9	GHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz to } 1.0\text{MHz}$		1.0	pF
$P_o$	$V_{CB}=10\text{V}, I_C=12\text{mA}, f=500\text{MHz}$	30		mW
$G_{pe}$	$V_{CE}=6.0\text{V}, I_C=1.5\text{mA}, f=450\text{MHz}, R_S=50\Omega$	12.5	19	dB
NF	$V_{CE}=6.0\text{V}, I_C=1.5\text{mA}, f=450\text{MHz}, R_S=50\Omega$		4.5	dB
$r_b'C_c$	$V_{CB}=6.0\text{V}, I_C=2.0\text{mA}, f=31.9\text{MHz}$	4.0	15	ps

# CP317X-2N2857

## 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)

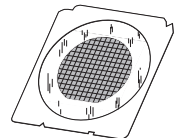
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### SAWN WAFER ON PLASTIC RING

**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.



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

#### Corporate Headquarters & Customer Support Team

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