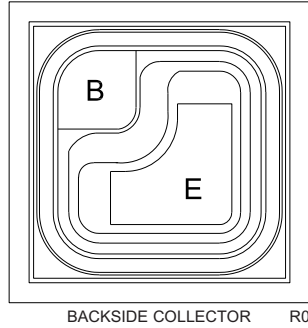


CP388X-2N2484

NPN - Low Noise Transistor Die

The CP388X-2N2484 is a silicon NPN transistor designed for low noise amplifier applications.



MECHANICAL SPECIFICATIONS:

Die Size	13 x 13 MILS
Die Thickness	5.9 MILS
Base Bonding Pad Size	3.9 x 3.9 MILS
Emitter Bonding Pad Size	5.4 x 5.4 MILS
Top Side Metalization	Al-Si – 17,000Å
Back Side Metalization	Au – 9,000Å
Scribe Alley Width	1.8 MILS
Wafer Diameter	5 INCHES
Gross Die Per Wafer	102,852

MAXIMUM RATINGS: (T_A=25°C)

Collector-Base Voltage	
Collector-Emitter Voltage	
Emitter-Base Voltage	
Continuous Collector Current	
Operating and Storage Junction Temperature	

SYMBOL

V _{CB0}	60
V _{CEO}	60
V _{EBO}	6.0
I _C	50
T _J , T _{stg}	-65 to +150

UNITS

V
V
V
mA
°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I _{CB0}	V _{CB} =45V		10	nA
I _{CEO}	V _{CE} =5.0V		2.0	nA
I _{EBO}	V _{EB} =5.0V		10	nA
BV _{CB0}	I _C =10μA	60		V
BV _{CEO}	I _C =10mA	60		V
BV _{EBO}	I _E =10μA	6.0		V
V _{CE(SAT)}	I _C =1.0mA, I _B =100μA		0.35	V
V _{BE(ON)}	V _{CE} =5.0V, I _C =100μA	0.5	0.7	V
h _{FE}	V _{CE} =5.0V, I _C =1.0μA	30		
h _{FE}	V _{CE} =5.0V, I _C =10μA	100	500	
h _{FE}	V _{CE} =5.0V, I _C =100μA	175		
h _{FE}	V _{CE} =5.0V, I _C =500μA	200		
h _{FE}	V _{CE} =5.0V, I _C =1.0mA	250		
h _{FE}	V _{CE} =5.0V, I _C =10mA		800	
h _{fe}	V _{CE} =5.0V, I _C =1.0mA, f=1.0kHz	150	900	
f _T	V _{CE} =5.0V, I _C =50μA, f=5.0MHz	15		MHz
f _T	V _{CE} =5.0V, I _C =0.5mA, f=30MHz	60		MHz
h _{ie}	V _{CE} =5.0V, I _C =1.0mA, f=1.0kHz	3.5	24	kΩ
h _{oe}	V _{CE} =5.0V, I _C =1.0mA, f=1.0kHz		40	μS
h _{re}	V _{CE} =5.0V, I _C =1.0mA, f=1.0kHz		800	x10 ⁻⁶

R0 (20-June 2016)

CP388X-2N2484

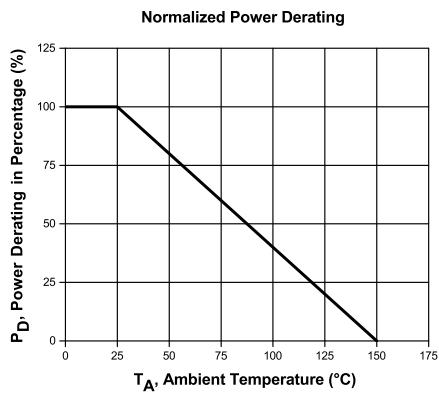
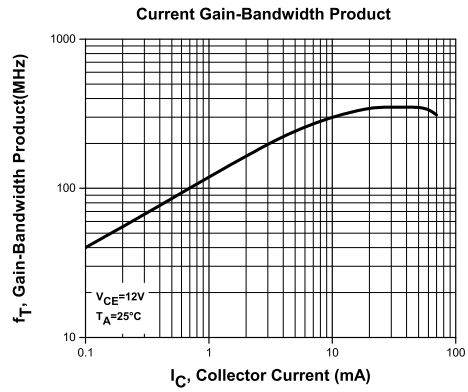
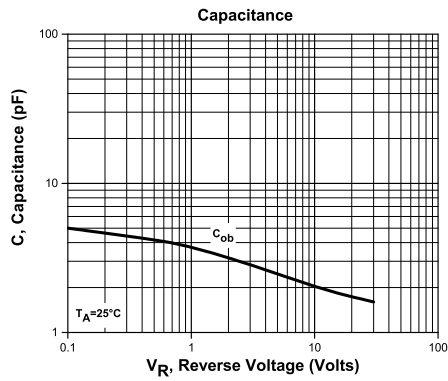
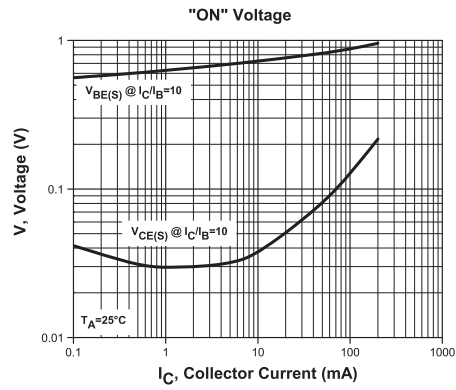
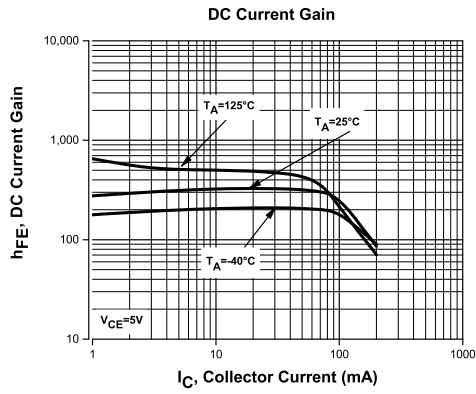
Typical Electrical Characteristics

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

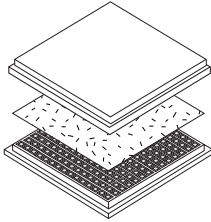
SYMBOL	TEST CONDITIONS	MAX	UNITS
C_{ob}	$V_{CB}=5.0\text{V}$, $I_E=0$, $f=140\text{kHz}$	6.0	pF
NF	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$, $R_S=10\text{k}\Omega$, BW=15.7kHz, 3.0dB PTS @ 10Hz, 10kHz	3.0	dB
NF	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$, $R_S=10\text{k}\Omega$, $f=100\text{Hz}$, BW=20Hz	10	dB
NF	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$, $R_S=10\text{k}\Omega$, $f=1.0\text{kHz}$, BW=200Hz	3.0	dB
NF	$V_{CE}=5.0\text{V}$, $I_C=10\mu\text{A}$, $R_S=10\text{k}\Omega$, $f=10\text{kHz}$, BW=2.0kHz	2.0	dB

CP388X-2N2484

Typical Electrical Characteristics



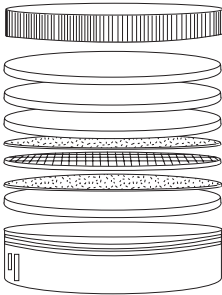
BARE DIE PACKING OPTIONS



BARE DIE IN TRAY (WAFFLE) PACK

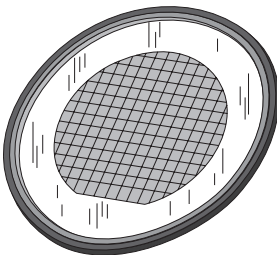
CT: Singulated die in tray (waffle) pack.
(example: CP211-PART NUMBER-CT)

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

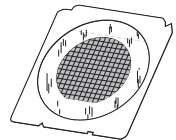
WN: Full wafer, unsawn, 100% tested with reject die inked.
(example: CP211-PART NUMBER-WN)



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.



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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