Central™
Semiconductor Corp.
www.centralsemi.com

# CP788X-BC556B

## PNP - General Purpose Transistor Die

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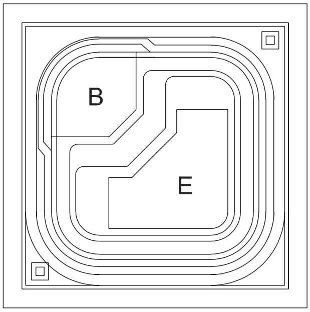
The CP788X-BC556B is a silicon PNP transistor designed for general purpose applications.



BACKSIDE COLLECTOR R0

**MECHANICAL SPECIFICATIONS:**

| | |
|---|---|
| Die Size | 13.7 x 13.7 MILS |
| Die Thickness | 5.9 MILS |
| Base Bonding Pad Size | 4.0 x 4.0 MILS |
| Emitter Bonding Pad Size | 5.5 x 5.5 MILS |
| Top Side Metalization | Al-Si – 17,000Å |
| Back Side Metalization | Au – 12,000Å |
| Scribe Alley Width | 1.8 MILS |
| Wafer Diameter | 6 INCHES |
| Gross Die Per Wafer | 126,028 |

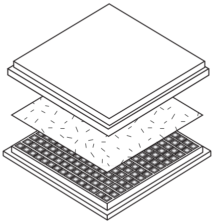
| **MAXIMUM RATINGS:** ($T_A$=25°C) | **SYMBOL** | | **UNITS** |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 80 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 65 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 5.0 | V |
| Continuous Collector Current | $I_C$ | 100 | mA |
| Peak Collector Current | $I_{CM}$ | 200 | mA |
| Peak Base Current | $I_{BM}$ | 200 | mA |
| Operating and Storage Junction Temperature | $T_J$, $T_{stg}$ | -55 to +150 | °C |

**ELECTRICAL CHARACTERISTICS:** ($T_A$=25°C)

| **SYMBOL** | **TEST CONDITIONS** | **MIN** | **MAX** | **UNITS** |
|---|---|---|---|---|
| $I_{CES}$ | $V_{CES}$=40V | | 100 | nA |
| $BV_{CEO}$ | $I_C$=2.0mA, $I_B$=0 | 65 | | V |
| $BV_{CBO}$ | $I_C$=100μA | 80 | | V |
| $BV_{EBO}$ | $I_E$=100μA, $I_C$=0 | 5.0 | | V |
| $V_{CE(SAT)}$ | $I_C$=10mA, $I_B$=0.5mA | | 0.30 | V |
| $V_{CE(SAT)}$ | $I_C$=100mA, $I_B$=5.0mA | | 0.65 | V |
| $V_{BE(ON)}$ | $V_{CE}$=5.0V, $I_C$=2.0mA | 0.55 | 0.70 | V |
| $V_{BE(ON)}$ | $V_{CE}$=5.0V, $I_C$=10mA | | 0.82 | V |
| $h_{FE}$ | $V_{CE}$=5.0V, $I_C$=2.0mA | 180 | 460 | |
| $C_{ob}$ | $V_{CB}$=10V, $I_C$=0, f=1.0MHz | | 6.0 | pF |
| NF | $V_{CE}$=5.0V, $I_C$=200μA, $R_S$=2.0kΩ, f=1.0kHz, BW=200Hz | | 10 | dB |
| $h_{fe}$ | $V_{CE}$=5.0V, $I_C$=2.0mA, f=1.0KHz | 240 | 500 | |

R0 (09-May 2022)

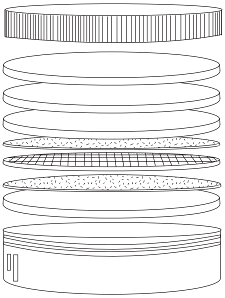
# BARE DIE PACKING OPTIONS



## BARE DIE IN TRAY (WAFFLE) PACK

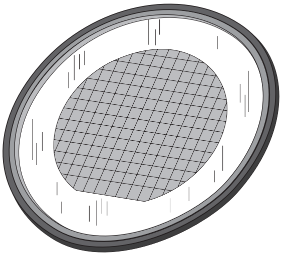
**CT**: Singulated die in tray (waffle) pack.
**(example: CP211-PART NUMBER-CT)**

**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

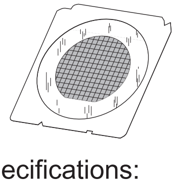
**WN**: Full wafer, unsawn, 100% tested with reject die inked.
**(example: CP211-PART NUMBER-WN)**



## 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.centralsemi.com/bdspecs**

R2 (3-April 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

## 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).

## CONTACT US

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