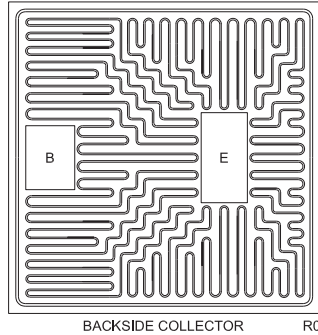


CP348-2N5154

NPN - High Current Transistor Die

The CP348-2N5154 is a silicon NPN transistor designed for high current applications.



MECHANICAL SPECIFICATIONS:

Die Size	82 x 82 MILS
Die Thickness	9.1 MILS
Base Bonding Pad Size	13 x 17 MILS
Emitter Bonding Pad Size	13 x 25 MILS
Top Side Metalization	Al-Si – 40,000Å
Back Side Metalization	Ti/Ni/Ag – 2,000Å/3,000Å/20,000Å
Scribe Alley Width	2.0 MILS
Wafer Diameter	5 INCHES
Gross Die Per Wafer	2,449

MAXIMUM RATINGS: ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	2.0	A
Peak Collector Current	I_{CM}	10	A
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$

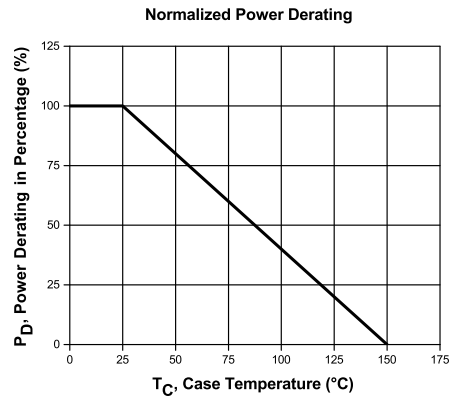
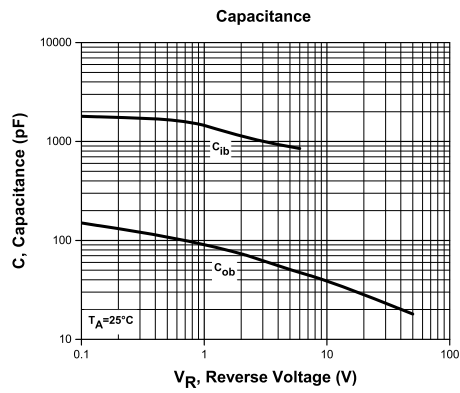
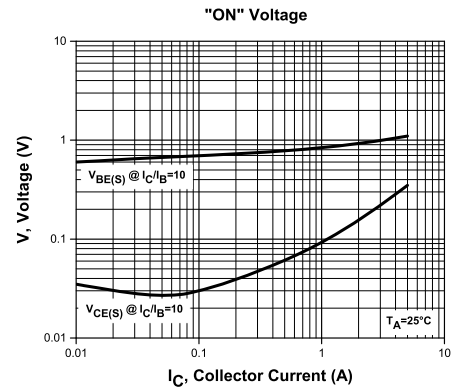
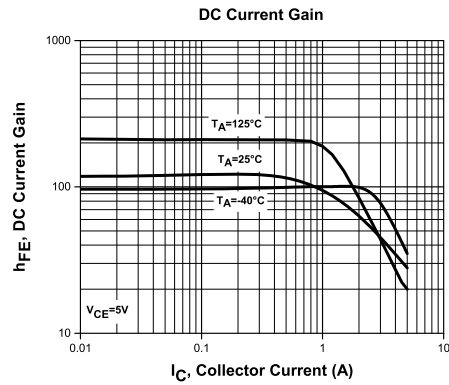
ELECTRICAL CHARACTERISTICS: ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CES}	$V_{CE}=60\text{V}$			1.0	μA
I_{CES}	$V_{CE}=100\text{V}$			1.0	mA
I_{CEO}	$V_{CE}=40\text{V}$			50	μA
I_{EBO}	$V_{EB}=5.0\text{V}$			1.0	μA
I_{EBO}	$V_{EB}=6.0\text{V}$			1.0	mA
BV_{CEO}	$I_C=100\text{mA}$	80			V
$V_{CE(SAT)}$	$I_C=2.5\text{A}, I_B=250\text{mA}$			0.75	V
$V_{CE(SAT)}$	$I_C=5.0\text{A}, I_B=500\text{mA}$			1.5	V
$V_{BE(SAT)}$	$I_C=2.5\text{A}, I_B=250\text{mA}$			1.45	V
$V_{BE(SAT)}$	$I_C=5.0\text{A}, I_B=500\text{mA}$			2.2	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=250\text{mA}$			1.45	V
h_{FE}	$V_{CE}=5.0\text{V}, I_C=50\text{mA}$	50			
h_{FE}	$V_{CE}=5.0\text{V}, I_C=2.5\text{A}$	70		200	
h_{FE}	$V_{CE}=5.0\text{V}, I_C=5.0\text{A}$	40			
h_{fe}	$V_{CE}=5.0\text{V}, I_C=0.1\text{A}, f=1.0\text{kHz}$	50			
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			250	pF
t_{on}	$V_{CC}=30\text{V}, I_C=5.0\text{A}, I_{B1}=0.5\text{A}$		0.5		μs
t_{off}	$V_{CC}=30\text{V}, I_C=5.0\text{A}, I_{B1}=I_{B2}=0.5\text{A}$		1.3		μs

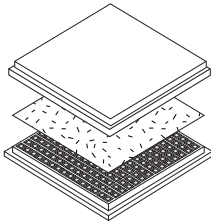
R0 (6-June 2016)

CP348-2N5154

Typical Electrical Characteristics



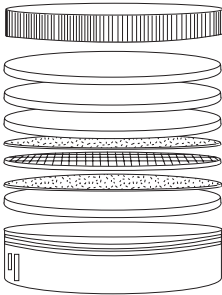
BARE DIE PACKING OPTIONS



BARE DIE IN TRAY (WAFFLE) PACK

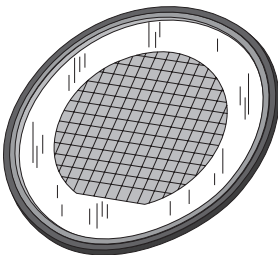
CT: Singulated die in tray (waffle) pack.
(example: CP211-PART NUMBER-CT)

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

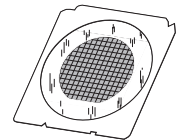
WN: Full wafer, unsawn, 100% tested with reject die inked.
(example: CP211-PART NUMBER-WN)



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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