CP349-BUY49S
NPN - High Current Transistor Die

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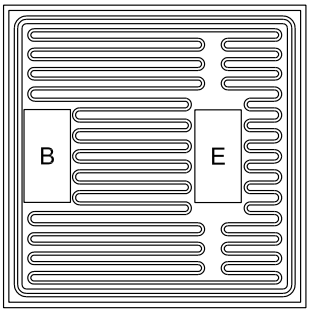
The CP349-BUY49S is a silicon NPN transistor designed for high current applications.



BACKSIDE COLLECTOR R0

MECHANICAL SPECIFICATIONS:

Die Size	51.2 x 51.2 MILS
Die Thickness	9.1 MILS
Base Bonding Pad Size	7.9 x 15.7 MILS
Emitter Bonding Pad Size	7.9 x 15.7 MILS
Top Side Metalization	Al – 30,000Å
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	6,487

MAXIMUM RATINGS: (T_C=25°C)	**SYMBOL**		**UNITS**
Collector-Base Voltage	V_{CBO}	250	V
Collector-Emitter Voltage	V_{CEO}	200	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	3.0	A
Peak Collector Current	I_{CM}	5.0	A
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=200V		0.1	μA
BV_{CBO}	I_C=100μA	250		V
BV_{CEO}	I_C=20mA	200		V
BV_{EBO}	I_E=1.0mA	6.0		V
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA		0.2	V
$V_{BE(SAT)}$	I_C=500mA, I_B=50mA		1.1	V
h_{FE}	V_{CE}=5.0V, I_C=20mA	40		
h_{FE}	V_{CE}=5.0V, I_C=500mA	40		
f_T	V_{CE}=10V, I_C=100mA	50		MHz
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		30	pF
t_{on}	V_{CC}=20V, I_C=500mA, I_{B1}=I_{B2}=50mA		0.3	μs
t_{off}	V_{CC}=20V, I_C=500mA, I_{B1}=I_{B2}=50mA		1.0	μs
$I_{S/B}$*	V_{CE}=50V	0.2		A

CP349-BUY49S
Typical Electrical Characteristics

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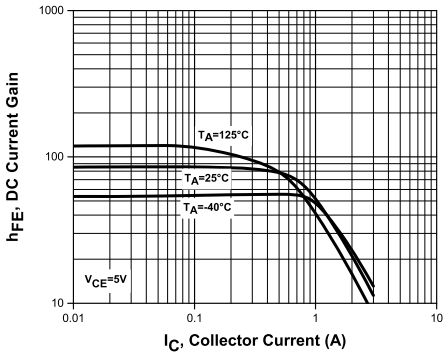
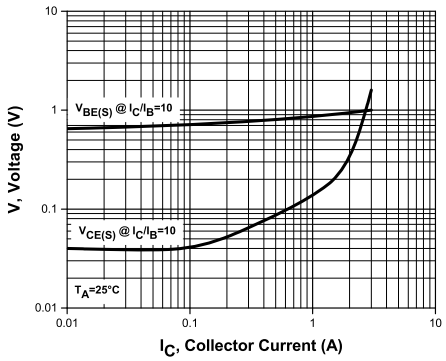
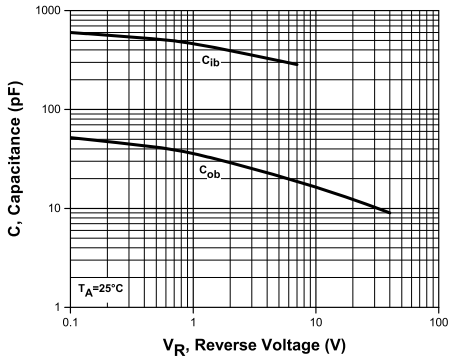
DC Current Gain



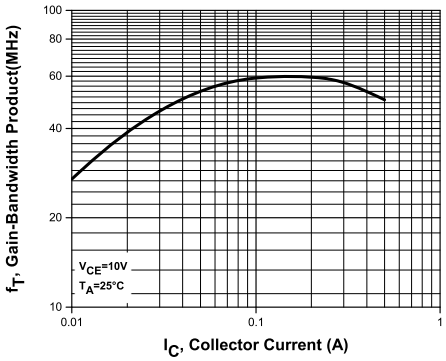
"ON" Voltage



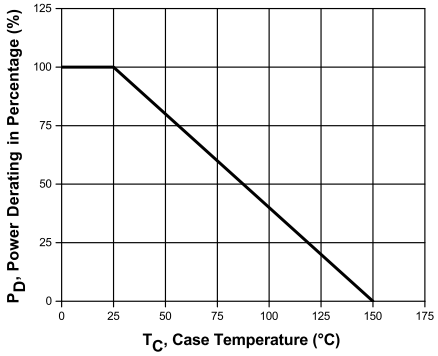
Capacitance



Current Gain-Bandwidth Product

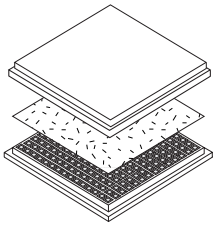


Normalized Power Derating



R0 (6-June 2016)

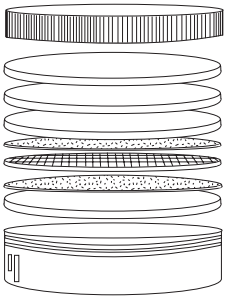
BARE DIE PACKING OPTIONS



BARE DIE IN TRAY (WAFFLE) PACK

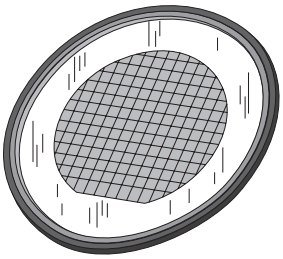
CT: Singulated die in tray (waffle) pack.
(example: CP211-PART NUMBER-CT)

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)



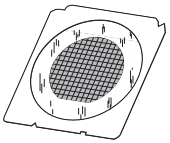
UNSAWN WAFER

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

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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