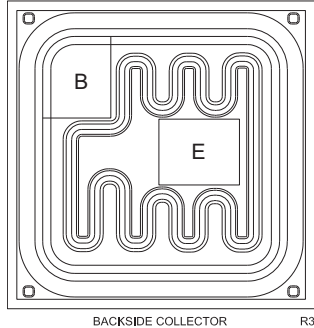


CP191V-2N2222A

NPN - Small Signal Transistor Die

The CP191V-2N2222A is a silicon NPN small signal transistor designed for general purpose switching applications.



MECHANICAL SPECIFICATIONS:

Die Size	16.5 x 16.5 MILS
Die Thickness	7.1 MILS
Base Bonding Pad Size	3.5 x 4.3 MILS
Emitter Bonding Pad Size	3.5 x 4.3 MILS
Top Side Metalization	Al – 30,000Å
Back Side Metalization	Au-As – 9,000Å
Scribe Alley Width	1.96 MILS
Wafer Diameter	5 INCHES
Gross Die Per Wafer	62,510

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

	SYMBOL		UNITS
Collector-Base Voltage	V_{CB0}	75	V
Collector-Emitter Voltage	V_{CE0}	40	V
Emitter-Base Voltage	V_{EB0}	6.0	V
Continuous Collector Current	I_C	800	mA
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CB0}	$V_{CB}=60\text{V}$		10	nA
I_{CEV}	$V_{CE}=60\text{V}, V_{EB}=3.0\text{V}$		10	nA
I_{EBO}	$V_{EB}=3.0\text{V}$		10	nA
BV_{CB0}	$I_C=10\mu\text{A}$	75		V
BV_{CE0}	$I_C=10\text{mA}$	40		V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0		V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.3	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1.0	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	0.6	1.2	V
$V_{BE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		2.0	V
h_{FE}	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	35		
h_{FE}	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	50		
h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	75		
h_{FE}	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100	300	
h_{FE}	$V_{CE}=1.0\text{V}, I_C=150\text{mA}$	50		
h_{FE}	$V_{CE}=10\text{V}, I_C=500\text{mA}$	40		
f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	300		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		8.0	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=100\text{kHz}$		25	pF

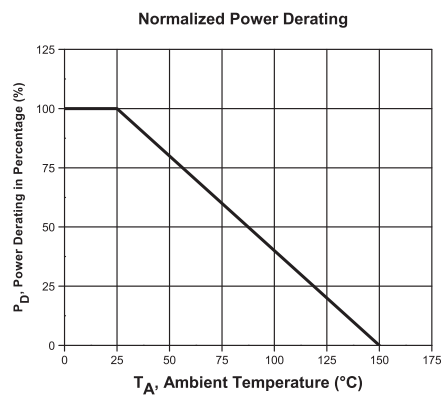
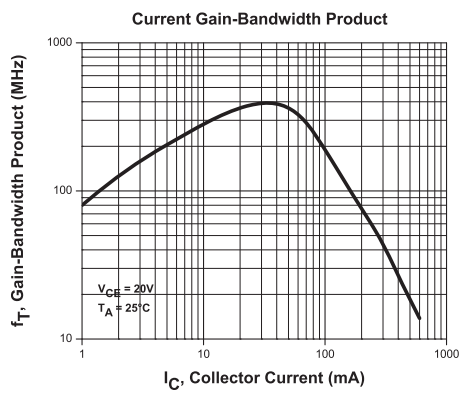
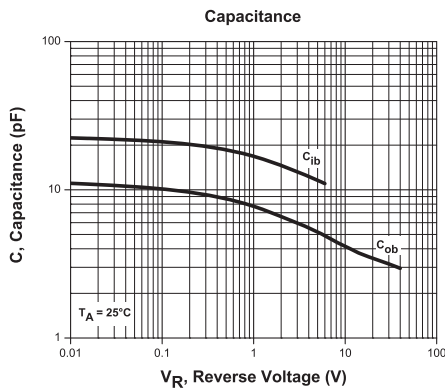
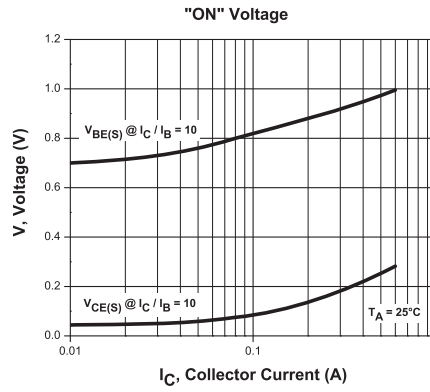
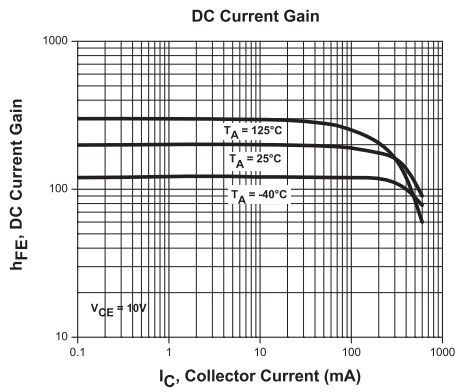
PACKING OPTIONS:

- CP191V-2N2222A-CT: Singulated die in waffle pack; 400 die per tray.
- CP191V-2N2222A-WN: Full wafer, unsawn, 100% tested with reject die inked.
- CP191V-2N2222A-WR: Full wafer, sawn and mounted on plastic ring, 100% tested with reject die inked.

R0 (6-March 2015)

CP191V-2N2222A

Typical Electrical Characteristics



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)
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- 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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