



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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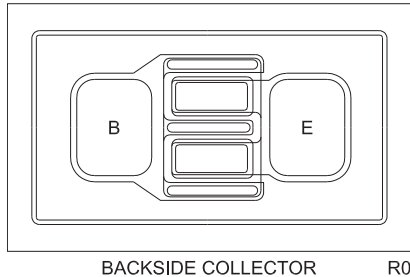


CP396V-2N2369A

NPN - Saturated Switch Transistor Die

0.2 Amp, 40 Volt

The CP396V-2N2369A is a silicon NPN transistor designed for high speed saturated switching applications.



MECHANICAL SPECIFICATIONS:

Die Size	14.2 x 8.7 MILS
Die Thickness	7.1 MILS
Base Bonding Pad Size	2.9 x 3.7 MILS
Emitter Bonding Pad Size	2.9 x 3.7 MILS
Top Side Metalization	Al – 13,000Å
Back Side Metalization	Au-As – 9,000Å
Scribe Alley Width	1.96 MILS
Wafer Diameter	5 INCHES
Gross Die Per Wafer	139,524

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

Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CES}	40	V
Collector-Emmitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	4.5	V
Continuous Collector Current	I_C	200	mA
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$

SYMBOL

UNITS

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=20\text{V}$		400	nA
BV_{CBO}	$I_C=10\mu\text{A}$	40		V
BV_{CES}	$I_C=10\mu\text{A}$	40		V
BV_{CEO}	$I_C=10\text{mA}$	15		V
BV_{EBO}	$I_E=10\mu\text{A}$	4.5		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$		200	mV
$V_{CE(SAT)}$	$I_C=30\text{mA}, I_B=3.0\text{mA}$		250	mV
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		500	mV
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$	700	850	mV
$V_{BE(SAT)}$	$I_C=30\text{mA}, I_B=3.0\text{mA}$		1.15	V
$V_{BE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$		1.6	V
h_{FE}	$V_{CE}=1.0\text{V}, I_C=10\text{mA}$	40	120	
h_{FE}	$V_{CE}=0.4\text{V}, I_C=30\text{mA}$	30		
h_{FE}	$V_{CE}=1.0\text{V}, I_C=100\text{mA}$	20		
f_T	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	500		MHz
C_{ob}	$V_{CB}=5.0\text{V}, I_E=0, f=140\text{kHz}$		4.0	pF
t_{on}	$V_{CC}=3.0\text{V}, I_C=10\text{mA}, I_{B1}=3.0\text{mA}$		12	ns
t_{off}		$I_{B2}=1.5\text{mA}$	18	ns

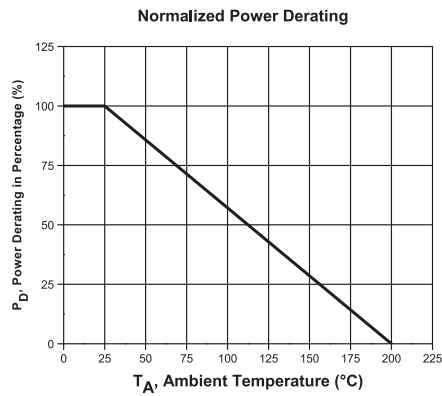
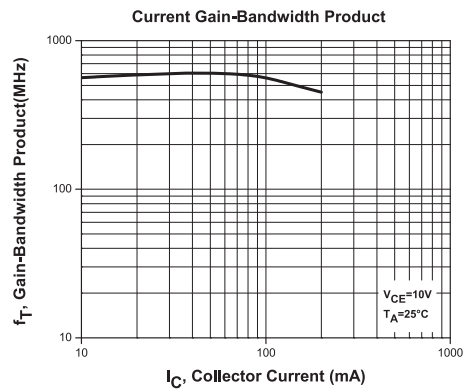
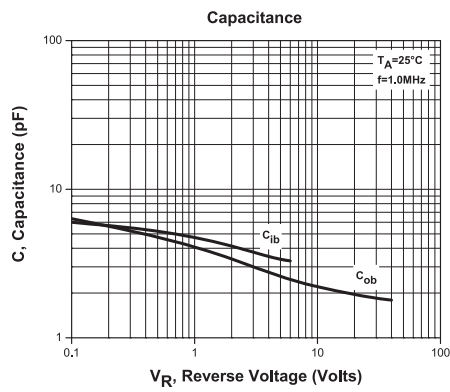
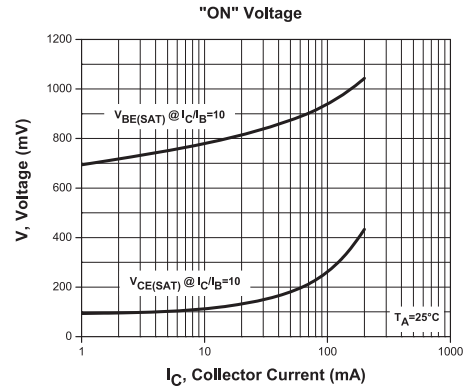
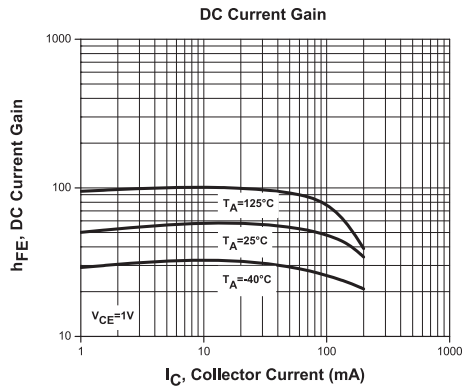
PACKING OPTIONS:

- CP396V-2N2369A-CT: Singulated die in waffle pack; 700 die per tray.
- CP396V-2N2369A-WN: Full wafer, unsawn, 100% tested with reject die inked.
- CP396V-2N2369A-WR: Full wafer, sawn and mounted on plastic ring, 100% tested with reject die inked.

R0 (6-March 2015)

CP396V-2N2369A

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)
- 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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