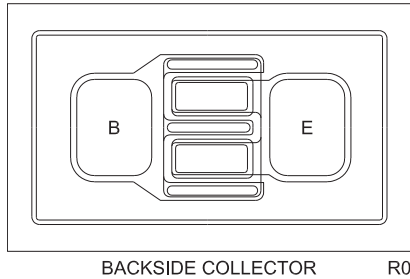


CP396V-2N2369A

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°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 | °C |

SYMBOL

UNITS

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

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|----------------------|---|-----|------|-------|
| I _{CBO} | V _{CB} =20V | | 400 | nA |
| BV _{CBO} | I _C =10μA | 40 | | V |
| BV _{CES} | I _C =10μA | 40 | | V |
| BV _{CEO} | I _C =10mA | 15 | | V |
| BV _{EBO} | I _E =10μA | 4.5 | | V |
| V _{CE(SAT)} | I _C =10mA, I _B =1.0mA | | 200 | mV |
| V _{CE(SAT)} | I _C =30mA, I _B =3.0mA | | 250 | mV |
| V _{CE(SAT)} | I _C =100mA, I _B =10mA | | 500 | mV |
| V _{BE(SAT)} | I _C =10mA, I _B =1.0mA | 700 | 850 | mV |
| V _{BE(SAT)} | I _C =30mA, I _B =3.0mA | | 1.15 | V |
| V _{BE(SAT)} | I _C =100mA, I _B =10mA | | 1.6 | V |
| h _{FE} | V _{CE} =1.0V, I _C =10mA | 40 | 120 | |
| h _{FE} | V _{CE} =0.4V, I _C =30mA | 30 | | |
| h _{FE} | V _{CE} =1.0V, I _C =100mA | 20 | | |
| f _T | V _{CE} =10V, I _C =10mA, f=100MHz | 500 | | MHz |
| C _{ob} | V _{CB} =5.0V, I _E =0, f=140kHz | | 4.0 | pF |
| t _{on} | [V _{CC} =3.0V, I _C =10mA, I _{B1} =3.0mA I _{B2} =1.5mA] | | 12 | ns |
| t _{off} | | | 18 | ns |

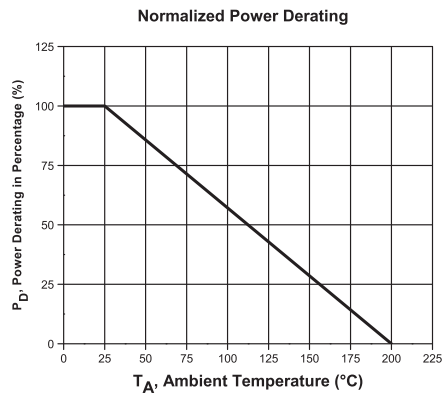
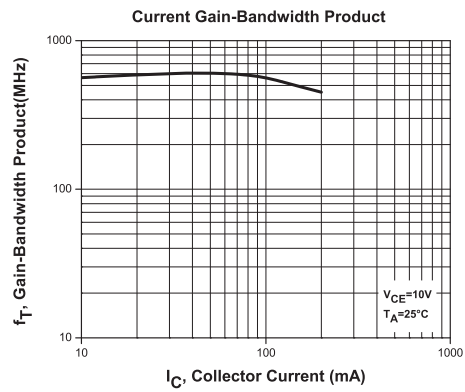
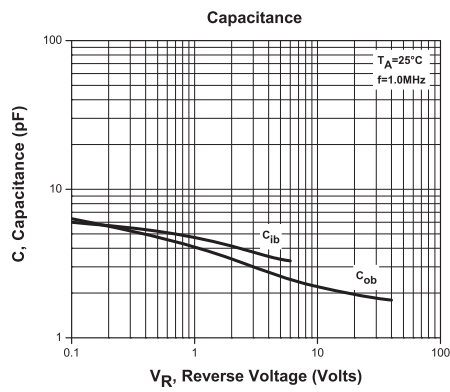
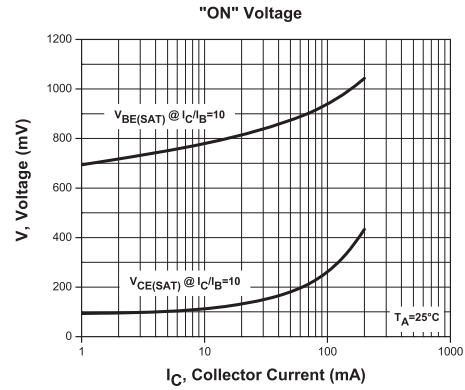
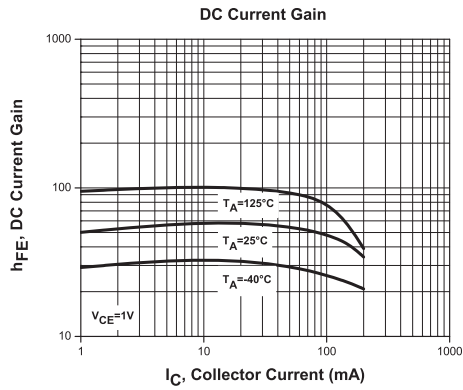
PACKING OPTIONS:

- 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



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Central's operations team provides the highest level of support to insure product is delivered on-time.

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- Consolidated shipping options
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- Custom product packing

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- 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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