

SURFACE MOUNT HIGH VOLTAGE NPN SILICON DARLINGTON TRANSISTOR



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## DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPTA29 is an NPN silicon darlington transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring extremely high voltage and high gain.

## MARKING CODE: C29

MAXIMUM RATINGS: (T <sub>A</sub> =25°C)	SYMBOL		UNITS
Collector-Base Voltage	V <sub>CBO</sub>	100	V
Collector-Emitter Voltage	V <sub>CES</sub>	100	V
Emitter-Base Voltage	V <sub>EBO</sub>	12	V
Continuous Collector Current	۱ <sub>C</sub>	500	mA
Power Dissipation	PD	350	mW
Operating and Storage Junction Temperature	T <sub>J,</sub> T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	Θ <sub>JA</sub>	357	°C/W

#### **ELECTRICAL CHARACTERISTICS:** (T<sub>A</sub>=25°C) unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
ICES	V <sub>CE</sub> =80V		500	nA
I <sub>CBO</sub>	V <sub>CB</sub> =80V		100	nA
I <sub>EBO</sub>	V <sub>BE</sub> =10V		100	nA
BVCES	Ι <sub>C</sub> =100μΑ	100		V
BVCBO	Ι <sub>C</sub> =100μΑ	100		V
BVEBO	I <sub>E</sub> =10μA	12		V
V <sub>CE</sub> (SAT)	Ι <sub>C</sub> =10mA, Ι <sub>B</sub> =10μA		1.2	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =100μA		1.5	V
V <sub>BE(ON)</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100mA		2.0	V
hFE	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA	10,000		
h <sub>FE</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =100mA	10,000		
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA, f=100MHz	125		MHz
Cob	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz		8.0	pF

R4 (3-February 2010)

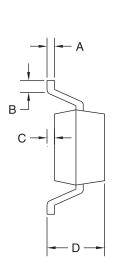


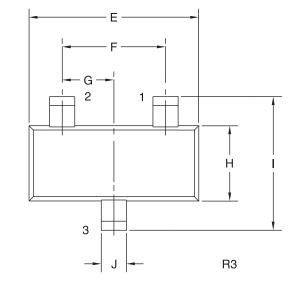




### SURFACE MOUNT HIGH VOLTAGE NPN SILICON DARLINGTON TRANSISTOR

## SOT-23 CASE - MECHANICAL OUTLINE





LEAD CODE:
1) Base
0) =

2) Emitter
3) Collector

MARKING CODE: C29

DIMENSIONS						
	INCHES		MILLIMETERS			
SYMBOL	MIN	MAX	MIN	MAX		
А	0.003	0.007	0.08	0.18		
В	0.006	-	0.15	-		
С	-	0.005	-	0.13		
D	0.035	0.043	0.89	1.09		
E	0.110	0.120	2.80	3.05		
F	0.075		1.90			
G	0.037		0.95			
Н	0.047	0.055	1.19	1.40		
	0.083	0.098	2.10	2.49		
J	0.014	0.020	0.35	0.50		

SOT-23 (REV: R3)

R4 (3-February 2010)

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# **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

#### **DESIGNER SUPPORT/SERVICES**

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities

ss your design challenges.

· Custom product packing

- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- · Application and design sample kits

Custom bar coding for shipments

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).
- 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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