#### CMPTA29

# 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	$V_{CBO}$	100	V
Collector-Emitter Voltage	V <sub>CES</sub>	100	V
Emitter-Base Voltage	$V_{EBO}$	12	V
Continuous Collector Current	IC	500	mA
Power Dissipation	$P_{D}$	350	mW
Operating and Storage Junction Temperature	T <sub>J,</sub> T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	$\Theta_{JA}$	357	°C/W

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

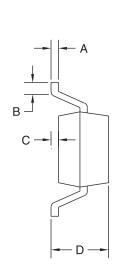
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
ICES	V <sub>CE</sub> =80V		500	nA
I <sub>CBO</sub>	V <sub>CB</sub> =80V		100	nA
I <sub>EBO</sub>	V <sub>BE</sub> =10V		100	nA
BVCES	I <sub>C</sub> =100μA	100		V
BV <sub>CBO</sub>	I <sub>C</sub> =100μA	100		V
BVEBO	I <sub>E</sub> =10μA	12		V
VCE(SAT)	I <sub>C</sub> =10mA, I <sub>B</sub> =10μA		1.2	V
VCE(SAT)	I <sub>C</sub> =100mA, I <sub>B</sub> =100μA		1.5	V
V <sub>BE(ON)</sub>	$V_{CE}$ =5.0V, $I_{C}$ =100mA		2.0	V
h <sub>FE</sub>	$V_{CE}$ =5.0V, $I_{C}$ =10mA	10,000		
h <sub>FE</sub>	$V_{CE}$ =5.0V, $I_{C}$ =100mA	10,000		
fT	$V_{CE}$ =5.0V, $I_{C}$ =10mA, f=100MHz	125		MHz
C <sub>ob</sub>	$V_{CB}$ =10V, $I_E$ =0, f=1.0MHz		8.0	pF

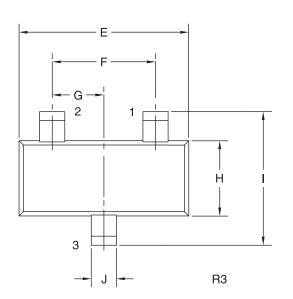
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#### **SURFACE MOUNT HIGH VOLTAGE NPN SILICON DARLINGTON TRANSISTOR**



# **SOT-23 CASE - MECHANICAL OUTLINE**





# LEAD CODE:

- 1) Base 2) Emitter 3) Collector

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DIMENSIONS							
	INCHES		MILLIMETERS				
SYMBOL	MIN	MAX	MIN	MAX			
Α	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			
Е	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			
ĺ	0.083	0.098	2.10	2.49			
J	0.014	0.020	0.35	0.50			

SOT-23 (REV: R3)

#### **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 guick 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

- 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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