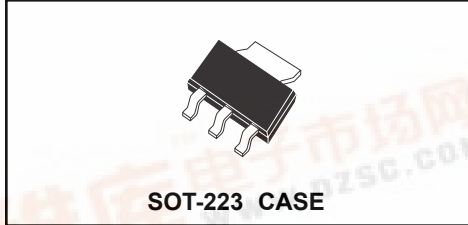


**CZTA28**  
**SURFACE MOUNT**  
**NPN DARLINGTON TRANSISTOR**



**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZTA28 type is a NPN Silicon Darlington Transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring extremely high gain.

**MAXIMUM RATINGS:** (T<sub>A</sub>=25°C)

	<b>SYMBOL</b>		<b>UNITS</b>
Collector-Emitter Voltage	V <sub>CES</sub>	80	V
Collector-Base Voltage	V <sub>CBO</sub>	80	V
Emitter-Base Voltage	V <sub>EBO</sub>	12	V
Collector Current	I <sub>C</sub>	500	mA
Power Dissipation	P <sub>D</sub>	2.0	W
Operating and Storage			
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	θ <sub>JA</sub>	62.5	°C/W

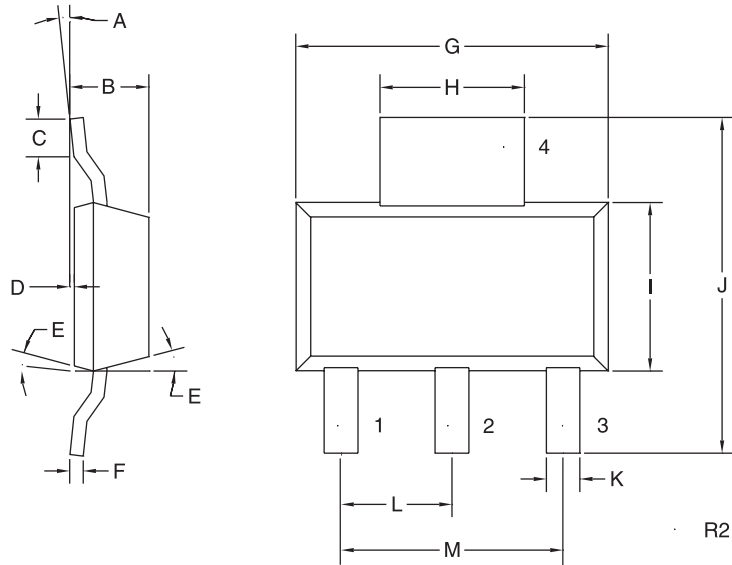
**ELECTRICAL CHARACTERISTICS:** (T<sub>A</sub>=25°C unless otherwise noted)

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>MAX</b>	<b>UNITS</b>
I <sub>CBO</sub>	V <sub>CB</sub> =60V		100	nA
I <sub>CES</sub>	V <sub>CE</sub> =60V		500	nA
I <sub>EBO</sub>	V <sub>EB</sub> =10V		100	nA
BV <sub>CBO</sub>	I <sub>C</sub> =100μA	80		V
BV <sub>CES</sub>	I <sub>C</sub> =100μA	80		V
BV <sub>EBO</sub>	I <sub>E</sub> =10μA	12		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <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
h <sub>FE</sub>	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
C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=100kHz		8.0	pF

R0 ( 13-November 2001)

**SURFACE MOUNT  
NPN DARLINGTON TRANSISTOR**

**SOT-223 CASE - MECHANICAL OUTLINE**



**Lead Code:**

- 1) BASE
- 2) COLLECTOR
- 3) EMITTER
- 4) COLLECTOR

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0°	7°	0°	7°
B	0.063	0.067	1.60	1.70
C	0.022		0.55	
D	0.001	0.004	0.03	0.10
E	15°		15°	
F	0.009	0.013	0.23	0.33
G	0.248	0.264	6.30	6.71
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.71
J	0.264	0.287	6.71	7.29
K	0.024	0.031	0.61	0.79
L	0.091		2.31	
M	0.181		4.60	

SOT-223 (REV: R2)