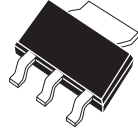


**CZTA28**  
**SURFACE MOUNT**  
**NPN SILICON DARLINGTON**  
**TRANSISTOR**



**SOT-223 CASE**

# 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.

**MARKING CODE: FULL PART NUMBER**

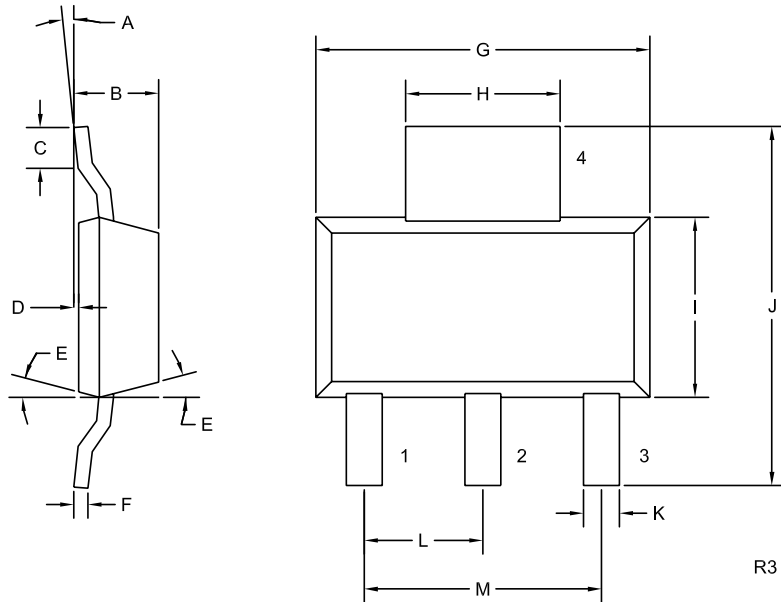
**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

	SYMBOL		UNITS
Collector-Emitter Voltage	$V_{CES}$	80	V
Collector-Base Voltage	$V_{CBO}$	80	V
Emitter-Base Voltage	$V_{EBO}$	12	V
Collector Current	$I_C$	500	mA
Power Dissipation	$P_D$	2.0	W
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\Theta_{JA}$	62.5	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=60\text{V}$		100	nA
$I_{CES}$	$V_{CE}=60\text{V}$		500	nA
$I_{EBO}$	$V_{EB}=10\text{V}$		100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	80		V
$BV_{CES}$	$I_C=100\mu\text{A}$	80		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	12		V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=10\mu\text{A}$		1.2	V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=100\mu\text{A}$		1.5	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$		2.0	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	10,000		
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$	10,000		
$f_T$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	125		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$		8.0	pF

**SOT-223 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING CODE:**

**FULL PART NUMBER**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0°	10°	0°	10°
B	0.059	0.071	1.50	1.80
C	0.018	---	0.45	---
D	0.000	0.004	0.00	0.10
E	15°		15°	
F	0.009	0.014	0.23	0.35
G	0.248	0.264	6.30	6.70
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.70
J	0.264	0.287	6.70	7.30
K	0.024	0.033	0.60	0.85
L	0.091		2.30	
M	0.181		4.60	

SOT-223 (REV: R3)

R2 (17-June 2004)