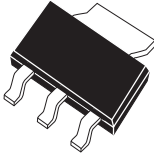


**CZT5338**

**NPN SILICON  
POWER TRANSISTOR**

**POWER  
223<sup>TM</sup>**



**SOT-223 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZT5338 type is an NPN silicon power transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring extremely high current amplification and switching capability.

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

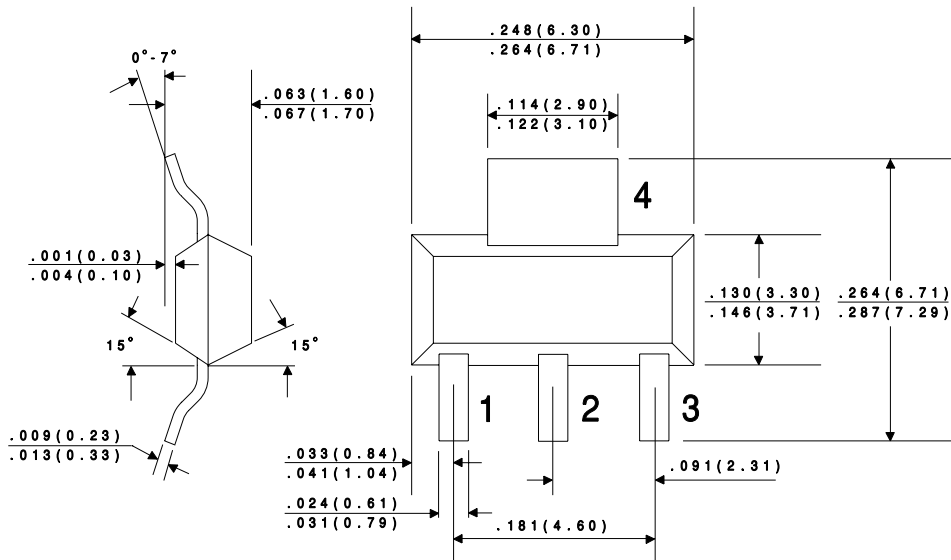
	<b>SYMBOL</b>		<b>UNITS</b>
Collector-Base Voltage	$V_{CBO}$	100	V
Collector-Emitter Voltage	$V_{CEO}$	100	V
Emitter-Base Voltage	$V_{EBO}$	6.0	V
Collector Current	$I_C$	5.0	A
Base Current	$I_B$	1.0	A
Power Dissipation	$P_D$	2.0	W
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^{\circ}\text{C}$
Thermal Resistance	$\Theta_{JA}$	62.5	$^{\circ}\text{C}/\text{W}$

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

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>MAX</b>	<b>UNITS</b>
$I_{CBO}$	$V_{CB}=100\text{V}$		10	$\mu\text{A}$
$I_{EBO}$	$V_{BE}=6.0\text{V}$		100	$\mu\text{A}$
$I_{CEO}$	$V_{CE}=90\text{V}$		100	$\mu\text{A}$
$BV_{CEO}$	$I_C=50\text{mA}$	100		V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=200\text{mA}$		0.7	V
$V_{CE(SAT)}$	$I_C=5.0\text{A}, I_B=500\text{mA}$		1.2	V
$V_{BE(SAT)}$	$I_C=2.0\text{A}, I_B=200\text{mA}$		1.2	V
$V_{BE(SAT)}$	$I_C=5.0\text{A}, I_B=500\text{mA}$		1.8	V
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	30		
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=2.0\text{A}$	30	120	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=5.0\text{A}$	20		

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$f_T$	$V_{CE}=10V, I_C=500mA, f=10MHz$	30		MHz
$C_{ob}$	$V_{CB}=10V, I_E=0, f=1.0MHz$		250	pF
$C_{ib}$	$V_{BE}=2.0V, I_C=0, f=1.0MHz$		1000	pF
$t_d$	$V_{CC}=40V, V_{BE}=3.0V, I_C=2.0A, I_{B1}=200mA$		100	ns
$t_r$	$V_{CC}=40V, V_{BE}=3.0V, I_C=2.0A, I_{B1}=200mA$		100	ns
$t_s$	$V_{CC}=40V, I_C=2.0A, I_{B1}=I_{B2}=200mA$		2.0	$\mu s$
$t_f$	$V_{CC}=40V, I_C=2.0A, I_{B1}=I_{B2}=200mA$		200	ns

All dimensions in inches (mm).



LEAD CODE:

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