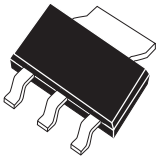
CZT5338

NPN SILICON
POWER TRANSISTOR

POWER 223™



SOT-223 CASE

Central™
Semiconductor Corp.

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°C)

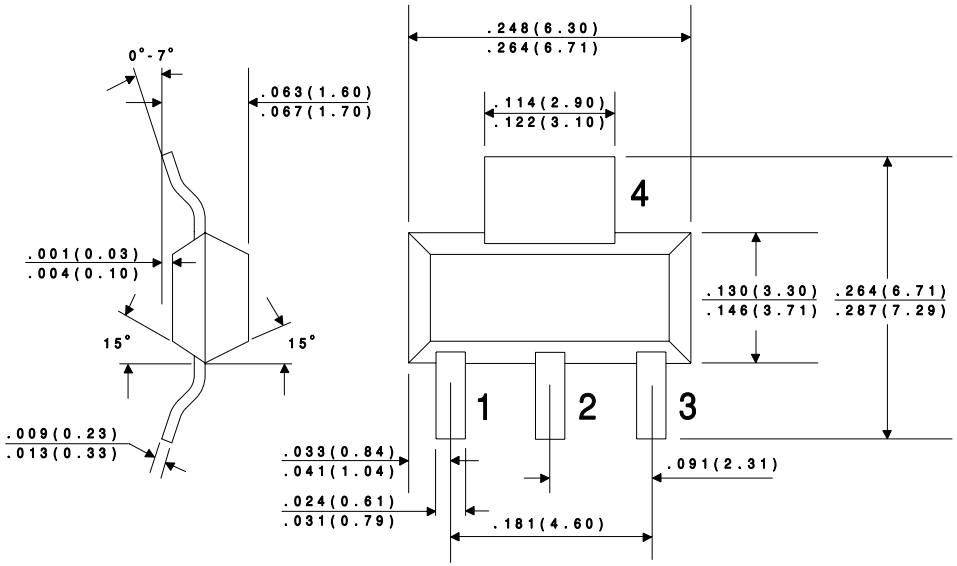
	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	5.0	A
Base Current	I_B	1.0	A
Power Dissipation	P_D	2.0	W
Operating and Storage Junction Temperature	T_J,T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}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

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

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

R2

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