

CZT2680

**SURFACE MOUNT
HIGH VOLTAGE
NPN SILICON
SWITCHING POWER TRANSISTOR**



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**POWER
223™**



SOT-223 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CZT2680 NPN High Voltage Switching Power Transistor, manufactured by the epitaxial planar process, combines both power and high speed switching characteristics in a SOT-223 Surface Mount Package. Typical applications include drivers and general high voltage switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_A=25°C)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V _{CBO}	250
V _{CEO}	200
V _{EBO}	6.0
I _C	1.5
I _{CM}	2.0
P _D	2.0
T _J , T _{stg}	-65 to +150
θ _{JA}	62.5

UNITS

V
V
V
A
A
W
°C
°C/W

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

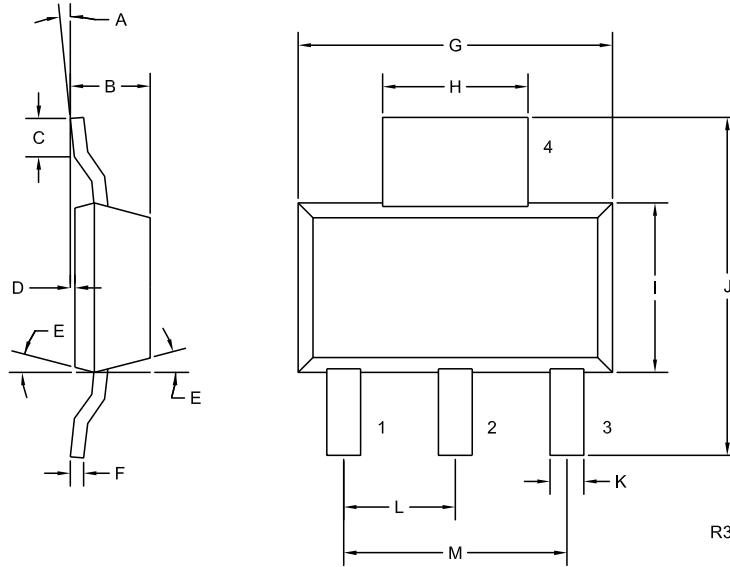
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I _{CBO}	V _{CB} =200V			100	nA
BV _{CBO}	I _C =100μA	250	435		V
BV _{CEO}	I _C =20mA	200	275		V
BV _{EBO}	I _E =100μA	6.0	9.0		V
V _{CE(SAT)}	I _C =100mA, I _B =10mA		45	150	mV
V _{CE(SAT)}	I _C =500mA, I _B =50mA		95	200	mV
V _{CE(SAT)}	I _C =1.0A, I _B =150mA		135	500	mV
V _{BE(SAT)}	I _C =500mA, I _B =50mA		0.83	1.10	V
V _{BE(SAT)}	I _C =1.0A, I _B =150mA		0.95	1.20	V
h _{FE}	V _{CE} =5.0V, I _C =20mA	40	105		
h _{FE}	V _{CE} =5.0V, I _C =500mA	40	90		
h _{FE}	V _{CE} =5.0V, I _C =1.0A	15	47		
f _T	V _{CE} =20V, I _C =100mA, f=1.0MHz	50	80		MHz
C _{ob}	V _{CB} =10V, I _E =0, f=1.0MHz			30	pF
t _{on}	I _C =500mA, V _{CC} =20V, I _{B1} = I _{B2} =50mA		0.3		μs
t _{off}	I _C =500mA, V _{CC} =20V, I _{B1} = I _{B2} =50mA		1.0		μs

R3 (1-March 2010)

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SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Base
- 2) Collector
- 3) Emitter
- 4) Collector

MARKING:

FULL PART NUMBER

SYMBOL	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)

R3 (1-March 2010)