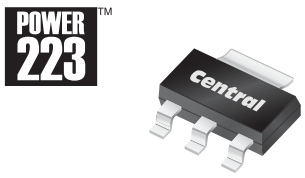
CZT2680

SURFACE MOUNT SILICON HIGH VOLTAGE NPN SWITCHING POWER TRANSISTOR



SOT-223 CASE

www.centralsemi.com

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)	**SYMBOL**		**UNITS**
Collector-Base Voltage	V_{CBO}	250	V
Collector-Emitter Voltage	V_{CEO}	200	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	1.5	A
Peak Collector Current	I_{CM}	2.0	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)

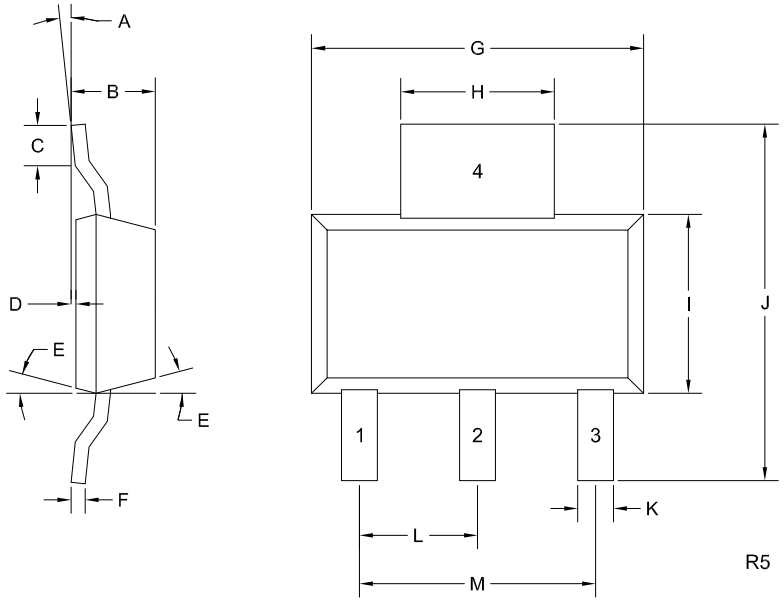
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{CBO}	V_{CB}=200V			100	nA
BV_{CBO}	I_C=100μA	250	435		V
BV_{CEO}	I_C=20mA	200	275		V
BV_{EBO}	I_E=100μA	6.0	9.0		V
$V_{CE(SAT)}$	I_C=100mA, I_B=10mA		45	150	mV
$V_{CE(SAT)}$	I_C=500mA, I_B=50mA		95	200	mV
$V_{CE(SAT)}$	I_C=1.0A, I_B=150mA		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

R5 (9-May 2019)

CZT2680

SURFACE MOUNT SILICON
HIGH VOLTAGE NPN
SWITCHING POWER TRANSISTOR

SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:
1) Base
2) Collector
3) Emitter
4) Collector

MARKING:
FULL PART NUMBER

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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	10°		10°	
F	0.009	0.014	0.23	0.35
G	0.248	0.270	6.30	6.85
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: R5)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

Worldwide Distributors:
www.centralsemi.com/wwdistributors