

SOT-223 Plastic-Encapsulate Transistors

SOT-223

TRANSISTOR (NPN)

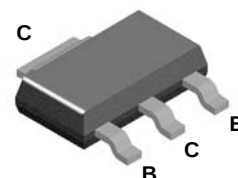
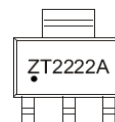
FEATURES

- Epitaxial planar die construction
- Complementary PNP Type available (PZT2907A)
- RoHS product for packing code suffix "G"
- Halogen free product for packing code suffix "H"
- **Moisture Sensitivity Level 1**

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	600	mA
P_C	Collector Power Dissipation	1	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55 to +150	$^{\circ}\text{C}$

MARKING:



Solid dot = Green molding compound device,
if none, the normal device.

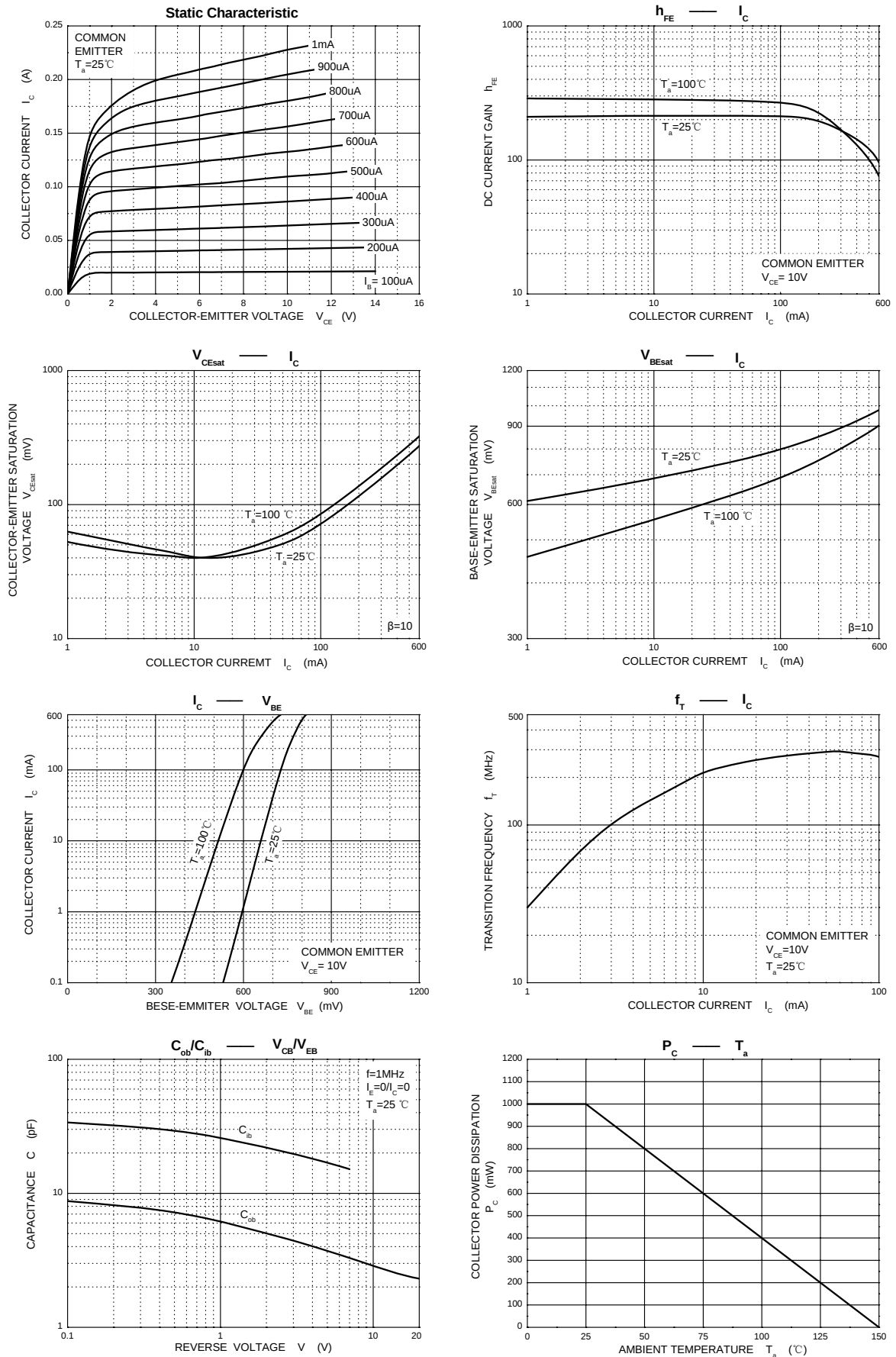
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	75		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$		10	nA
Collector cut-off current	I_{CEX}	$V_{CE}=60\text{V}, V_{BE(off)}=3\text{V}$		10	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=3\text{V}, I_C=0$		10	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	35		
	$h_{FE(2)}$	$V_{CE}=10\text{V}, I_C=1\text{mA}$	50		
	$h_{FE(3)}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	75		
	$h_{FE(4)}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100	300	
	$h_{FE(5)}$	$V_{CE}=1\text{V}, I_C=150\text{mA}$	50		
	$h_{FE(6)}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		1	V
	$V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		2.0	V
	$V_{BE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.2	V
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	300		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		8	pF
Delay time	t_d	$V_{CC}=30\text{V}, I_C=150\text{mA}$		10	nS
Rise time	t_r	$V_{BE(off)}=0.5\text{V}, I_{B1}=15\text{mA}$		25	nS
Storage time	t_s	$V_{CC}=30\text{V}, I_C=150\text{mA}$		225	nS
Fall time	t_f	$I_{B1}=-I_{B2}=15\text{mA}$		60	nS



SOT-223 Plastic-Encapsulate Transistors

Typical Characteristics

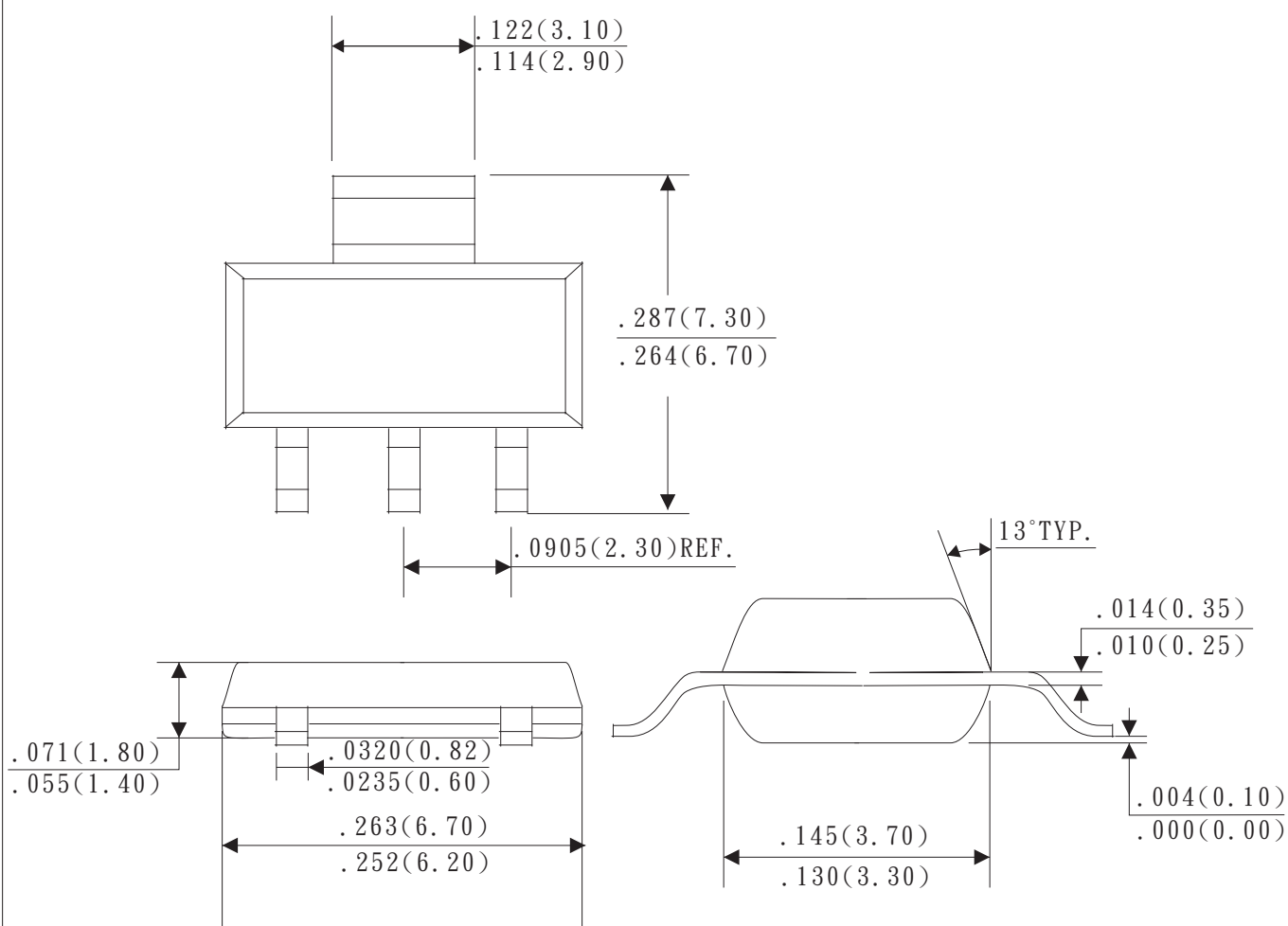




SOT-223 Plastic-Encapsulate Transistors

Outline Drawing

SOT-223



Dimensions in inches and (millimeters)

Rev.B



SOT-223 Plastic-Encapsulate Transistors

Ordering Information:

Device PN	Packing
PZT2222A-T ⁽¹⁾ G ⁽²⁾ -WS	Tape& Reel: 2.5Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing, 7"

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

Disclaimer

WILLAS reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. WILLAS or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on WILLAS data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. WILLAS does not assume any liability arising out of the application or use of any product or circuit.

WILLAS products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of WILLAS. Customers using or selling WILLAS components for use in such applications do so at their own risk and shall agree to fully indemnify WILLAS Inc and its subsidiaries harmless against all claims, damages and expenditures.