JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-223 Plastic-Encapsulate Transistors

PZTA44 TRANSISTOR (NPN)

SOT-223

1. BASE
2. COLLECTOR
3. EMITTER

FEATURES

- **Low current : 300mA(max)**
- **High voltage: V_{CEO}=400V**

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

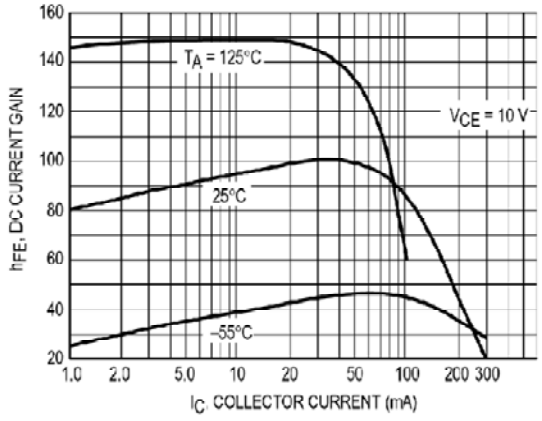
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	300	mA
P_C	Collector Power Dissipation	1000	mW
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

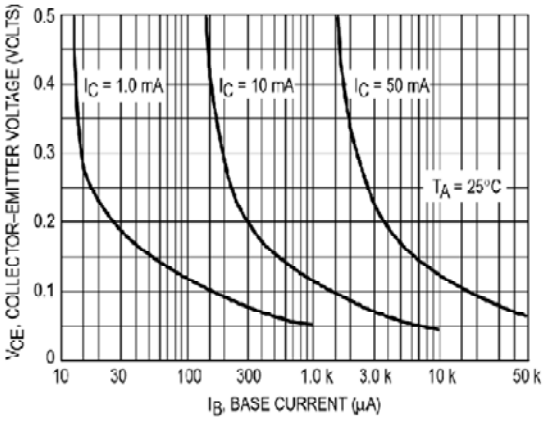
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	500			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=400V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=10V,I_C=1mA	40			
	$h_{FE(2)}$	V_{CE}=10V,I_C=10mA	50		200	
	$h_{FE(3)}$	V_{CE}=10V,I_C=50mA	45			
	$h_{FE(4)}$	V_{CE}=10V,I_C=100mA	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1mA,I_B=0.1mA			0.4	V
	$V_{CE(sat)}$	I_C=10mA,I_B=1mA			0.5	V
	$V_{CE(sat)}$	I_C=50mA,I_B=5mA			0.75	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10mA,I_B=1mA			0.85	V
Transition frequency	f_T	V_{CE}=10V,I_C=10mA,f=100MHz	20			MHz
Collector capacitance	C_C	V_{CB}=20V,I_E=0,f=1MHz			7	pF
Emitter capacitance	C_e	V_{EB}=0.5V,I_C=0,f=1MHz			180	pF

Typical characteristics

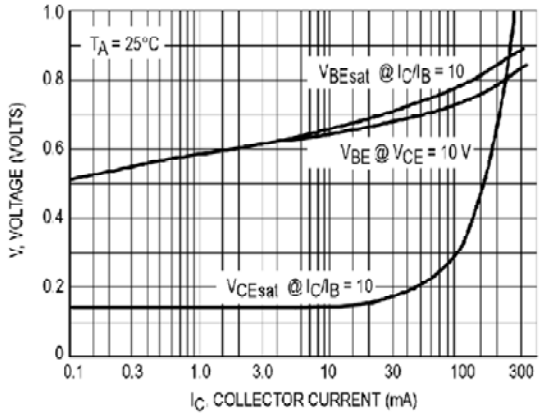
PZTA44



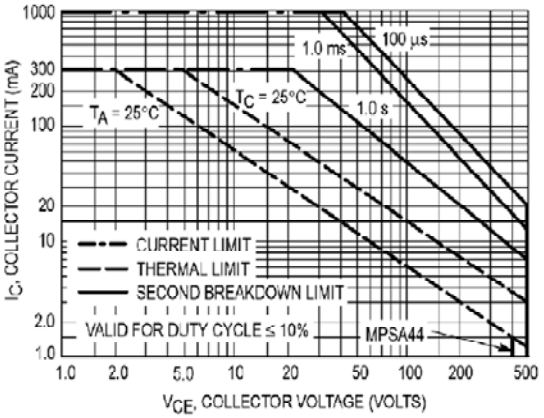
DC Current Gain



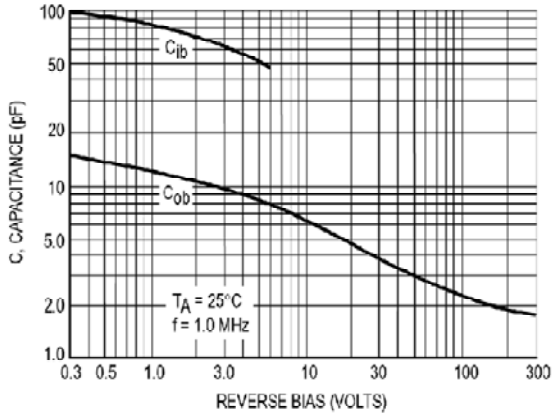
Collector Saturation Region



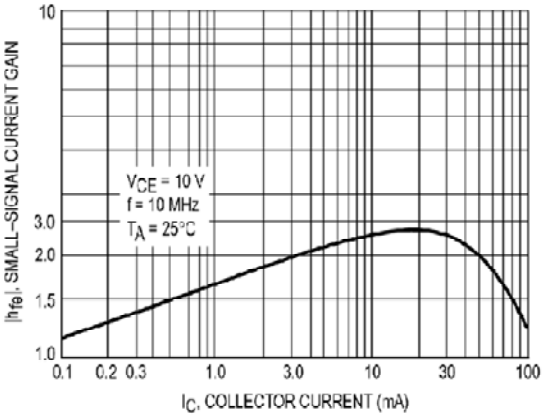
"On" Voltages



Active Region — Safe Operating Area



Capacitance



High Frequency Current Gain