

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- For AF driver and output stages
- Power switching applications

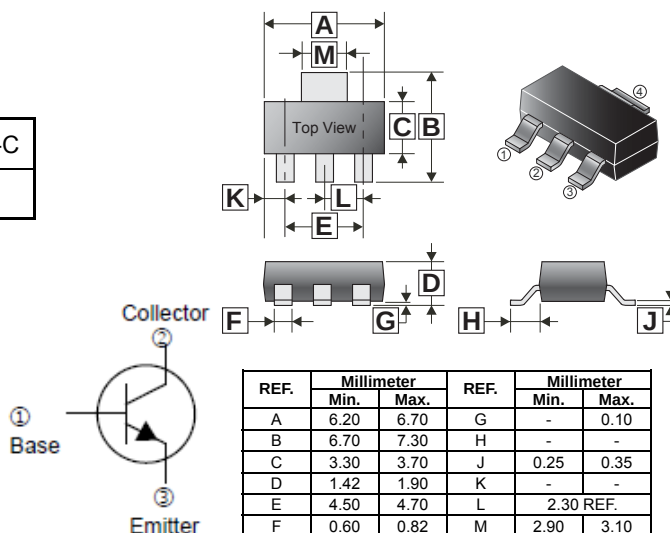
CLASSIFICATION OF h_{FE}

Product-Rank	PZT13003-A	PZT13003-B	PZT13003-C
Range	8~20	15~30	25~40

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-223	2.5K	13 inch

SOT-223



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

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V_{CBO}	700	V
Collector-Emitter Voltage	V_{CEO}	450	V
Emitter-Base Voltage	V_{EBO}	9	V
Collector Current -Continuous	I_C	1.5	A
Collector Power Dissipation	P_D	1.25	W
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	700		V	$I_C=1\text{mA}, I_E=0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	450		V	$I_C=10\text{mA}, I_B=0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	9		V	$I_E=1\text{mA}, I_C=0$
Collector cut-off current	I_{CBO}		0.1	mA	$V_{CB}=700\text{V}, I_E=0$
Emitter-Base Cutoff Current	I_{EBO}		0.05	mA	$V_{EB}=9\text{V}, I_C=0$
DC current gain	h_{FE}	8	40		$V_{CE}=10\text{V}, I_C=0.5\text{A}$
Collector-emitter saturation voltage ¹	$V_{CE(sat)}$		1	V	$I_C=1\text{A}, I_B=250\text{mA}$
Base-emitter voltage	$V_{BE(on)}$		1.2	V	$I_C=1\text{A}, I_B=250\text{mA}$
ON-Time	$T_{(on)}$		1	μS	$V_{CE}=10\text{V}, I_C=2\text{A}$ $I_{B1}=I_{B2}=400\text{mA}$
Storage time	t_S		4	μS	
Fall time	t_f		0.7	μS	
Transition frequency	f_T	4		MHz	$V_{CE}=10\text{V}, I_C=500\text{mA}, f=1.0\text{MHz}$

CHARACTERISTIC CURVES

Fig. 1 $I_C - V_{CE}$

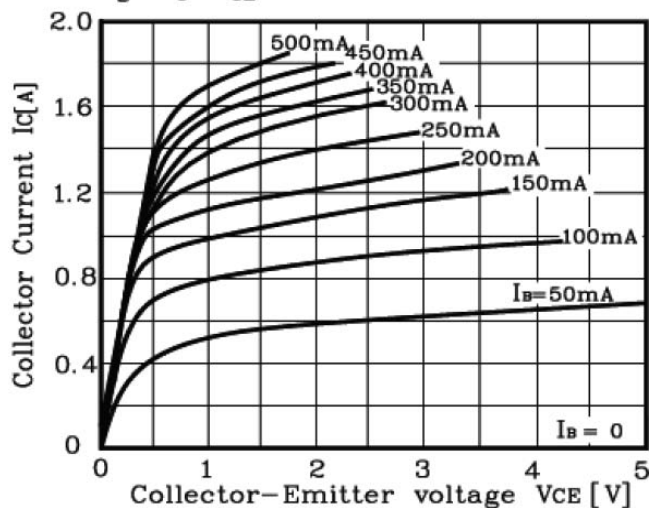


Fig. 2 $V_{BE(sat)}, V_{CE(sat)} - I_C$

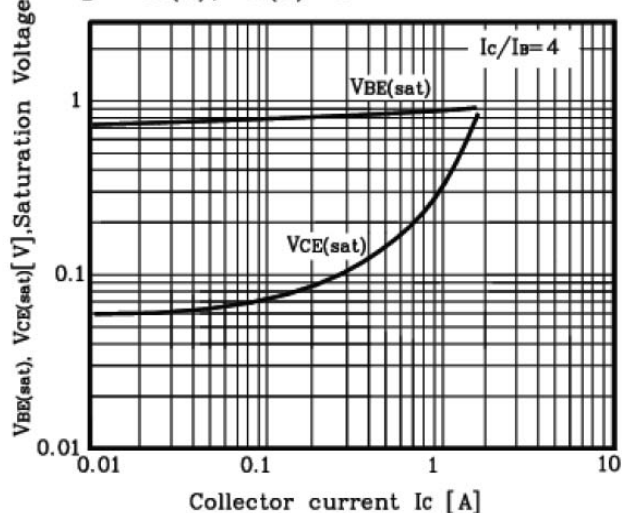


Fig. 3 $h_{FE} - I_C$

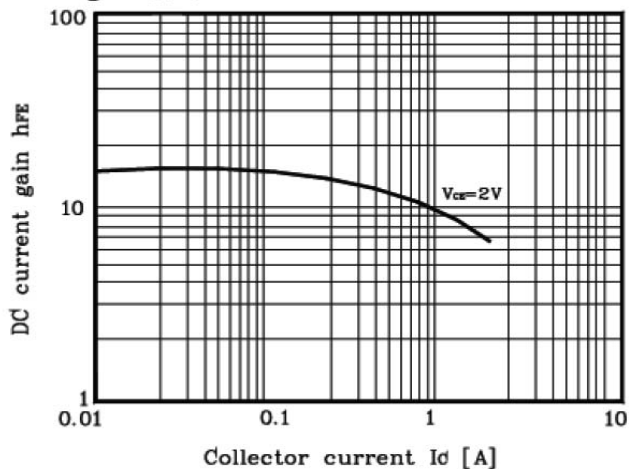


Fig. 4 Turn off time

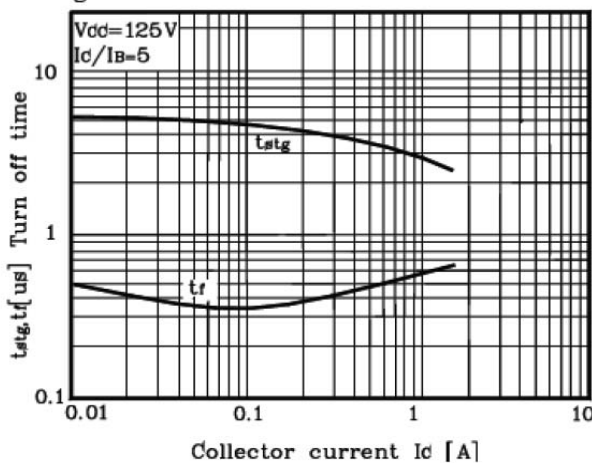


Fig. 5 Turn on time

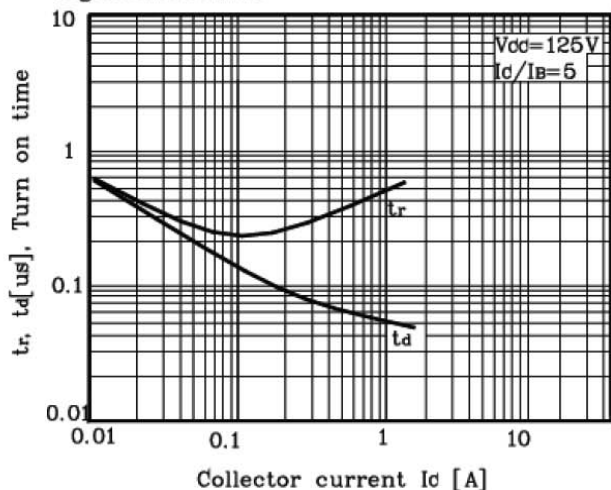


Fig. 6 Safe Operating Area

