Elektronische Bauelemente

PZT13003

1.5A , 700V

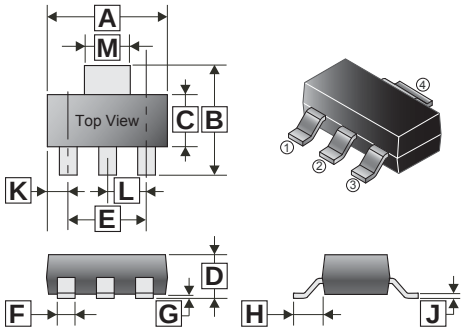
NPN Silicon Medium Power Transistor

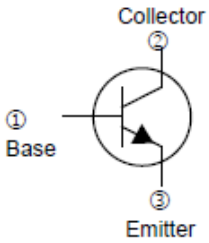
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- For AF driver and output stages
- Power switching applications

SOT-223





REF.	Millimeter Min.	Millimeter Max.	REF.	Millimeter Min.	Millimeter Max.
A	6.20	6.70	G	-	0.10
B	6.70	7.30	H	-	-
C	3.30	3.70	J	0.25	0.35
D	1.42	1.90	K	-	-
E	4.50	4.70	L	2.30 REF.	
F	0.60	0.82	M	2.90	3.10

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

ABSOLUTE MAXIMUM RATINGS (T_A=25°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	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

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

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CHARACTERISTIC CURVES

Fig. 1 I_C - V_{CE}

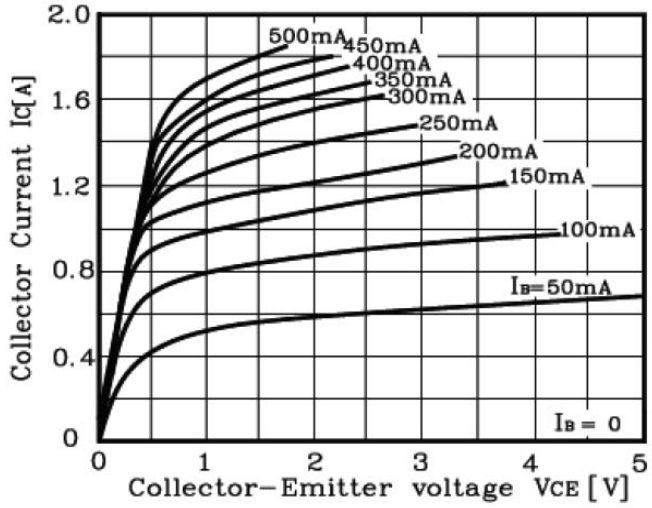

Fig. 2 $V_{BE(sat)}$, $V_{CE(sat)}$ - I_C

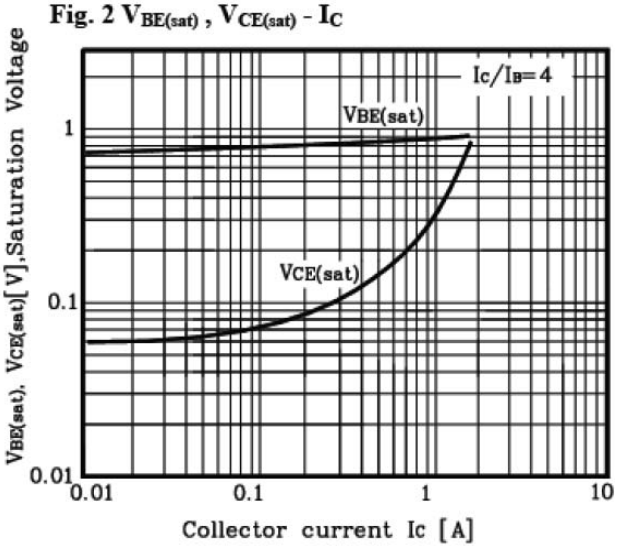

Fig. 3 h_{FE}-I_C

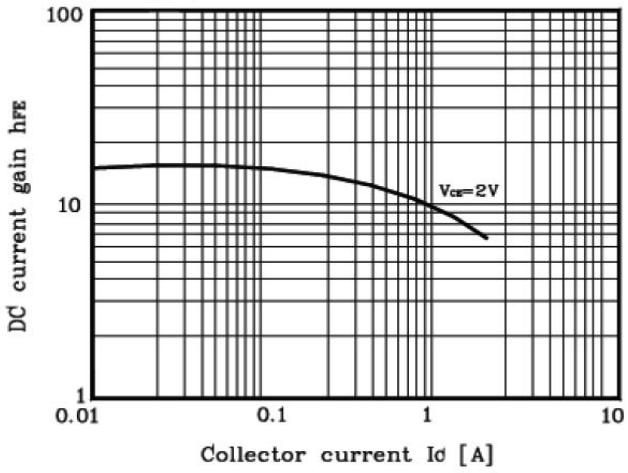

Fig. 4 Turn off time

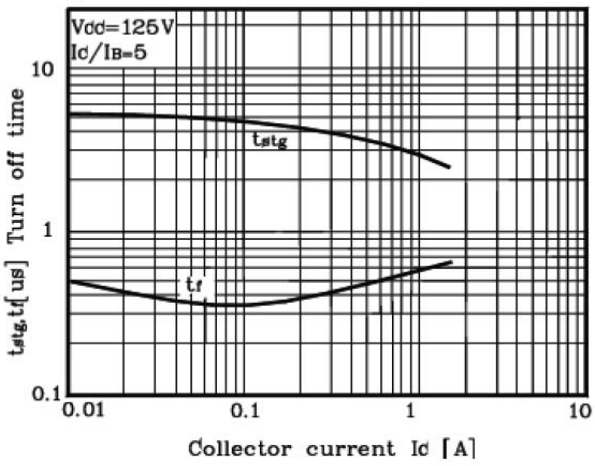

Fig. 5 Turn on time

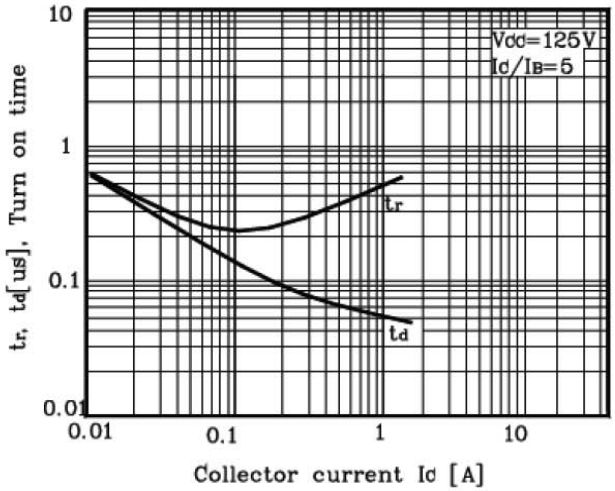

Fig. 6 Safe Operating Area