

PZT4401 TRANSISTOR (NPN)

FEATURES

Power dissipation

$$P_{CM}: 1 \text{ W (Tamb=25}^\circ\text{C)}$$

Collector current

$$I_{CM}: 0.6 \text{ A}$$

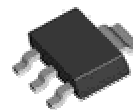
Collector-base voltage

$$V_{(BR)CBO}: 60 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^\circ\text{C to } +150^\circ\text{C}$$

SOT-223



1. BASE
2. COLLECTOR
3. EMITTER

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=60\text{V}, I_E=0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=6\text{V}, I_C=0$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=1\text{V}, I_C=0.1\text{mA}$	20			
	$h_{FE(2)}$	$V_{CE}=1\text{V}, I_C=1\text{mA}$	40			
	$h_{FE(3)}$	$V_{CE}=1\text{V}, I_C=10\text{mA}$	80			
	$h_{FE(4)}$	$V_{CE}=1\text{V}, I_C=150\text{mA}$	100		300	
	$h_{FE(5)}$	$V_{CE}=2\text{V}, I_C=500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$			0.4	V
	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.75	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$			0.95	V
	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			1.2	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	200			MHz
Collector capacitance	C_C	$V_{CB}=5\text{V}, I_E=0, f=1\text{MHz}$			8	pF
Emitter capacitance	C_E	$V_{EB}=0.5\text{V}, I_C=0, f=1\text{MHz}$			30	pF
Delay time	t_d	$V_{CC}=29.5\text{V}, I_C=150\text{mA}$ $V_{BB}=3.5\text{V}, I_{B1}=-I_{B2}=15\text{mA}$			15	nS
Rise time	t_r				20	nS
Storage time	t_s				200	nS
Fall time	t_f				60	nS