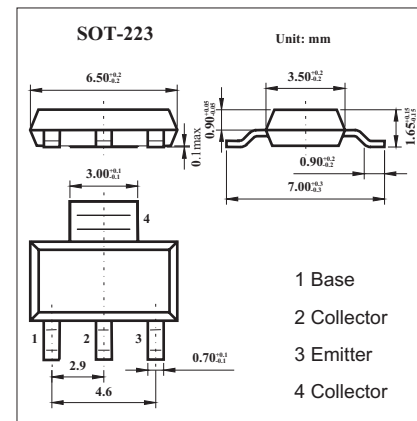


NPN Switching Transistor

PZT2222A

■ Features

- High current (max. 600 mA)
- Low voltage (max.40 V).

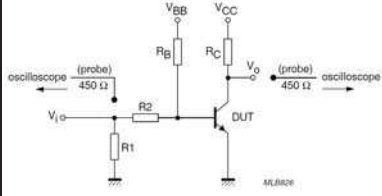


■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	75	V
Collector-emitter voltage	V_{CEO}	40	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	600	mA
Peak collector current	I_{CM}	800	mA
Peak base current	I_{BM}	200	mA
Total power dissipation $T_a \leq 25^\circ\text{C}$	P_{tot}	1	W
Storage temperature	T_{stg}	-65 to +150	$^\circ\text{C}$
Junction temperature	T_j	150	$^\circ\text{C}$
Operating ambient temperature	T_{amb}	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient	$R_{th(j-a)}$	109	K/W
Thermal resistance from junction to soldering point	$R_{th(j-s)}$	28	K/W

PZT2222A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	ICBO	IE = 0; VCB = 60 V			10	nA	
		IE = 0; VCB = 60 V; Tj = 125 °C			10	μA	
Emitter cutoff current	IEBO	IC = 0; VEB = 5 V			10	nA	
DC current gain	hFE	IC = 0.1 mA; VCE = 10 V	35				
		IC = 1 mA; VCE = 10 V	50				
		IC = 10 mA; VCE = 10 V	75				
		IC = 10 mA; VCE = 10 V; Ta = -55 °C	35				
		IC = 150 mA; VCE = 1 V *	50				
		IC = 150 mA; VCE = 10 V *	100		300		
		IC = 500 mA; VCE = 10 V *	40				
collector-emitter saturation voltage	VCEsat	IC = 150 mA; IB = 15 mA			300	mV	
		IC = 500 mA; IB = 50 mA			1	V	
base-emitter saturation voltage	VBEsat	IC = 150 mA; IB = 15 mA	0.6		1.2	V	
		IC = 500 mA; IB = 50 mA			2	V	
Collector capacitance	Cc	IE = iE = 0; VCB = 10 V; f = 1 MHz			8	pF	
Emitter capacitance	Ce	IC = IC = 0; VEB = 500 mV; f = 1 MHz			25	pF	
Turn-on time	ton	ICon = 150 mA; IBon = 15 mA; IBoff = -15 mA			35	ns	
Delay time	td				10	ns	
Rise time	tr					25	ns
Turn-off time	toff					250	ns
Storage time	ts		Vi = 9.5 V; T = 500 μs; tp = 10 μs; tr = tr ≤ 3 ns. R1 = 68 Ω; R2 = 325 Ω; RB = 325 Ω; RC = 160 Ω.			200	ns
Fall time	tf		VBB = -3.5 V; VCC = 29.5 V. Oscilloscope input impedance Zi = 50 Ω.			60	ns
Transition frequency	fT	IC = 20 mA; VCE = 20 V; f = 100 MHz	300			MHz	

* Pulse test: tp ≤ 300 μs; δ ≤ 0.02.

Marking

Marking	2222A
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