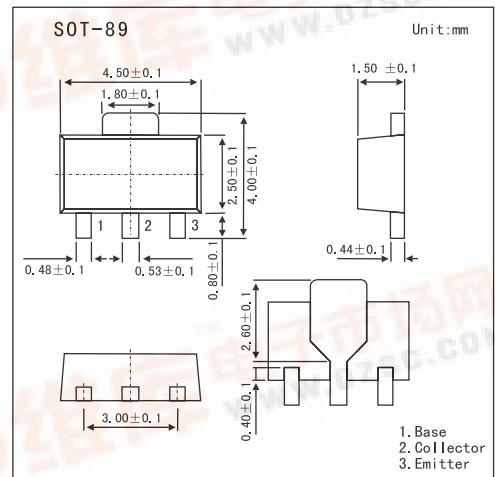


SMD Type Transistors

NPN Switching Transistor
PXT2222A

■ Features

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



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	60	V
Collector-emitter voltage	V _{CEO}	40	V
Emitter-base voltage	V _{EB0}	6	V
Collector current	I _C	100	mA
Peak collector current	I _{CM}	200	mA
Peak base current	I _{BM}	100	mA
Total power dissipation	P _{tot}		
	* 1	0.5	W
	* 2	0.8	
	* 3	1.1	
Storage temperature	T _{stg}	-65 to +150	°C
Junction temperature	T _J	150	°C
Operating ambient temperature	R _{amb}	-65 to +150	°C
Thermal resistance from junction to ambient	R _{th(j-a)}		
	* 1	250	K/W
	* 2	156	
	* 3	113	
Thermal resistance from junction to soldering point	R _{th(j-s)}	30	K/W

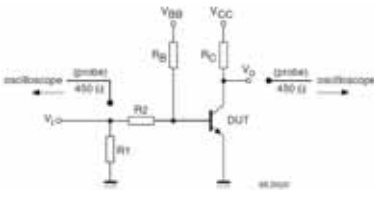
*1 Device mounted on a printed-circuit board, single-sided copper, tin-plated and standard - footprint.

*2 Device mounted on a printed-circuit board, single-sided copper, tin-plated and mounting pad for collector 1 cm².

*3 Device mounted on a printed-circuit board, single-sided copper, tin-plated and mounting - pad for collector 6 cm².

PXT2222A

■ 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 = 10V	35				
		IC = 1 mA; VCE = 10 V	50				
		IC = 10 mA; VCE = 10 V	75				
		IC = 10 mA; Vc = 10 V; Tj = -55 °C	35				
		IC = 150 mA; VCE = 1 V	50				
		VCE = 10 V, IC = 150 mA	100		300		
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	
Transition frequency	fT	IC = 20 mA; VCE = 10 V; f = 100 MHz	300			MHz	
Noise figure	F	IC = 200 µA; VCE = 5 V; RS = 2 kΩ; f = 1 kHz; B = 200 Hz			4	dB	
Turn-on time	ton	ICon = 150 mA; IBoN = 15 mA; IBoff = -15 mA			35	ns	
Delay time	td				15	ns	
Rise time	tr					20	ns
Turn-off time	toff					250	ns
Storage time	ts		V1 = 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

■ Marking

Marking	1P
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