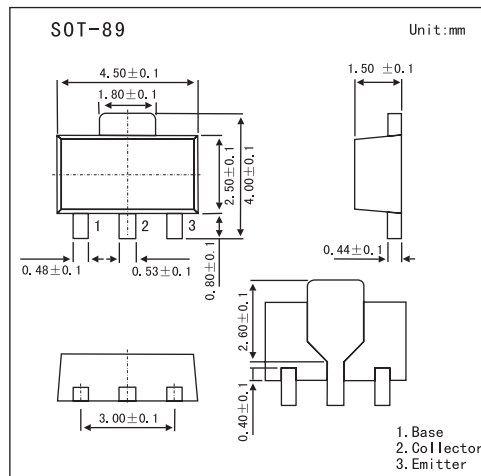


# PXT3906

■ Features

- High current (max. 100 mA)
- Low voltage (max. 40 V).



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	-40	V
Collector-emitter voltage	V <sub>CEO</sub>	-40	V
Emitter-base voltage	V <sub>EB0</sub>	-6	V
Collector current	I <sub>c</sub>	-100	mA
Peak collector current	I <sub>CM</sub>	-200	mA
Peak base current	I <sub>BM</sub>	-100	mA
Total power dissipation	P <sub>tot</sub>		
	* 1	0.45	W
	* 2	0.65	
	* 3	0.8	
Storage temperature	T <sub>stg</sub>	-65 to +150	°C
Junction temperature	T <sub>j</sub>	150	°C
Operating ambient temperature	R <sub>amb</sub>	-65 to +150	°C
Thermal resistance from junction to ambient	R <sub>th(j-a)</sub>		
	* 1	278	K/W
	* 2	192	
	* 3	156	
Thermal resistance from junction to soldering point	R <sub>th(j-s)</sub>	80	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 cm<sup>2</sup>.

\*3 Device mounted on a printed-circuit board, single-sided copper, tin-plated and mounting - pad for collector 6 cm<sup>2</sup>.

# PXT3906

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector cutoff current	ICBO	IE = 0; VCB = -30 V			-50	nA	
Emitter cutoff current	IEBO	IC = 0; VEB = -6 V			-50	nA	
DC current gain	hFE	VCE = -1 V; IC = -0.1 Ma	60				
		VCE = -1 V; IC = -1 mA	80				
		VCE = -1 V, IC = -10 mA	100		300		
		VCE = -1 V; IC = -50 mA	60				
		VCE = -1 V; IC = -100 mA	30				
collector-emitter saturation voltage	VCEsat	IC = -10 mA; IB = -1 mA			-250	mV	
		IC = -50 mA; IB = -5 mA			-400	mV	
base-emitter saturation voltage	VBEsat	IC = -10 mA; IB = -1 mA	-650		-850	mV	
		IC = -50 mA; IB = -5 mA			-950	mV	
Collector capacitance	Cc	IE = iE = 0; VCB = -5 V; f = 1 MHz			4.5	pF	
Emitter capacitance	Ce	IC = iC = 0; VEB = -500 mV; f = 1 MHz			10	pF	
Transition frequency	fT	IC = -10 mA; VCE = -20 V; f = 100 MHz	250			MHz	
Noise figure	F	IC = -100 μA; VCE = -5 V; Rs = 2 kΩ; f = 10 Hz to 15.7 kHz			4	dB	
Turn-on time	ton	ICon = -10 mA; IBon = -1 mA; IBoff = 1 mA			65	ns	
Delay time	td				35	ns	
Rise time	tr				35	ns	
Turn-off time	toff				300	ns	
Storage time	ts		V1 = 5 V; T = 500 μs; tp = 10 μs; tr = tr ≤ 3 ns. R1 = 56 Ω; R2 = 2.5 kΩ; RB = 3.9 kΩ; RC = 270 Ω.			225	ns
Fall time	tf		VBB = 1.9 V; VCC = -3 V. Oscilloscope: input impedance Zi = 50 Ω.			75	ns

■ Marking

Marking	2A
---------	----