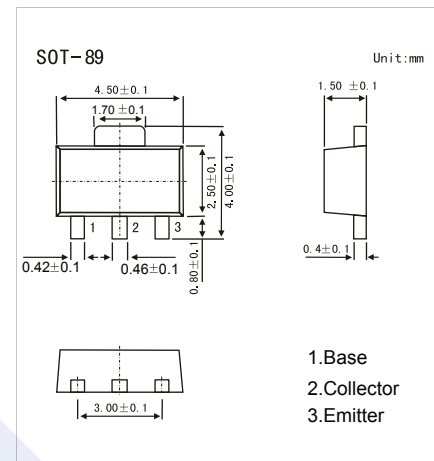


PNP Transistor

ZXTP2013Z

■ Features

- 3.5 amps continuous current
- Up to 10 amps peak current
- Very low saturation voltages

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-140	V
Collector - Emitter Voltage	V_{CEO}	-100	
Emitter - Base Voltage	V_{EBO}	-7	
Continuous Collector Current	I_C	-3.5	A
Peak Pulse Current	I_{CM}	-10	
Power Dissipation at $T_A = 25^\circ\text{C}$ ^(a)	P_d	1.5	W
Power Dissipation at $T_A = 25^\circ\text{C}$ ^(b)		2.1	
Thermal Resistance Junction to Ambient ^(a)	$R_{\theta JA}$	83	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction to Ambient ^(b)		60	
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

Notes:

- (a) For a device surface mounted on 25mm x 25mm x 1.6mm FR4 PCB with high coverage of single sided 1oz copper, in still air conditions.
- (b) For a device surface mounted on 50mm x 50mm x 1.6mm FR4 PCB with high coverage of single sided 1oz copper, in still air conditions.

PNP Transistor

ZXTP2013Z

■ Electrical Characteristics (Ta = 25°C unless otherwise stated)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	VCBO	Ic = -100 μ A, IE = 0	-140			V
Collector- emitter breakdown voltage	VCER	Ic = -1 μ A, RB $\leq$ 1k Ω	-140			
Collector- emitter breakdown voltage	VCEO	Ic = -10 mA, IB = 0 *	-100			
Emitter - base breakdown voltage	VEBO	IE = -100 μ A, IC = 0	-7			
Collector-base cut-off current	ICBO	VCB = -100 V, IE = 0			-20	nA
		VCB = -100 V, IE = 0, Ta = 100°C			-0.5	μ A
Collector cut-off current	ICER R $\leq$ 1k Ω	VCE = -100 V, IB = 0			-20	nA
		VCE = -100 V, IE = 0, Ta = 100°C			-0.5	μ A
Emitter cut-off current	IEBO	VEB = -6V, IC = 0			-10	nA
Collector-emitter saturation voltage	VCE(sat)	Ic = -0.1 A, IB = -10 mA *			-30	mV
		Ic = -1 A, IB = -100 mA *			-85	
		Ic = -2 A, IB = -200 mA *			-135	
		Ic = -4 A, IB = -400 mA *			-300	
Base - emitter saturation voltage	VBE(sat)	Ic = -4 A, IB = -400 mA *			-1060	
Base - emitter voltage	VBE(on)	VCE = -1 V, IB = -4 A *			-1030	
DC current gain	hFE	VCE = -1 V, IC = -10 mA *	100			
		VCE = -1 V, IC = -1 A *	100		300	
		VCE = -1 V, IC = -3 A *	25			
		VCE = -1 V, IC = -4 A *	15			
		VCE = -1 V, IC = -10 A *		5		
Collector output capacitance	Cobo	VCB = -10V, f=1MHz *		42		pF
Switching times	ton	IC = -1 A, VCC = -10 V, IB1 = -IB2 = -100 mA		42		ns
	toff			540		
Transition frequency	fr	VCE = -10V, IC = -100mA, f=50MHz		125		MHz

Note: * Measured under pulsed conditions. Pulse width 300 μ s; duty cycle 2%.

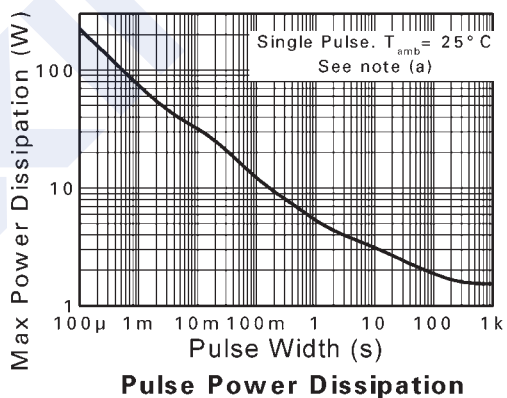
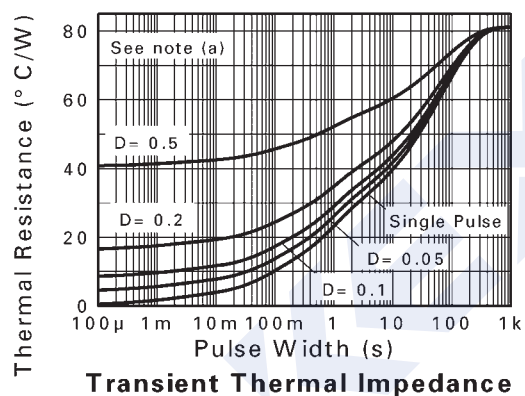
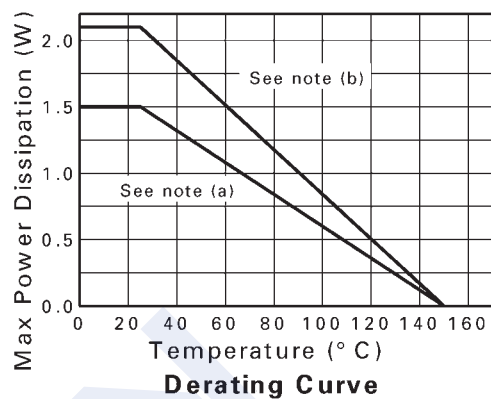
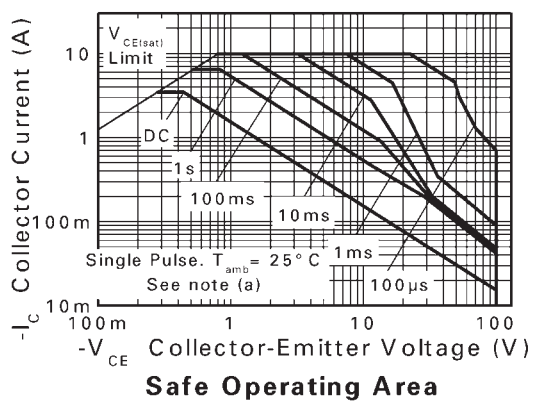
■ Marking

Marking	953
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PNP Transistor

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■ Typical Characteristics



PNP Transistor

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