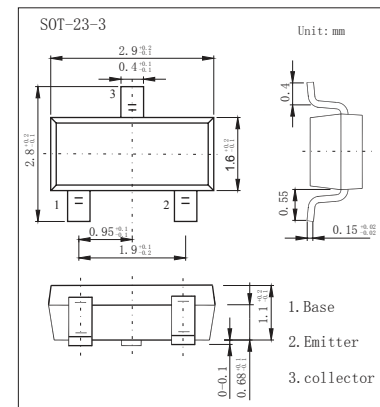


PNP Medium Power Transistor

ZXTP19100CFF

■ Features

- $BV_{CEO} > -100V$
- $BV_{ECO} > -7V$
- $I_C = -2A$ Continuous Collector Current
- Saturation Voltage $V_{CE(SAT)} < -120mV$ @ $-1A$
- h_{FE} Characterised Up to $-2A$
- $R_{CE(SAT)} = 95m\Omega$
- 1.5W Power Dissipation
- Complementary NPN Type: ZXTN19100CFF

■ Absolute Maximum Ratings (@ $T_A = +25^\circ C$, unless otherwise specified.)

Parameter		Symbol	Rating	Unit
Collector - Base Voltage		V_{CBO}	-110	V
Collector-Emitter Voltage (Forward blocking)		V_{CEX}	-110	
Collector - Emitter Voltage		V_{CEO}	-100	
Emitter-Collector Voltage (Reverse blocking)		V_{ECO}	-7	
Emitter - Base Voltage		V_{EBO}	-7	
Collector Current - Continuous		I_C	-2	A
Peak Pulse Current		I_{CM}	-3	
Base Current		I_B	-1	
Power Dissipation Linear Derating Factor	(Note 1)	P_D	0.84	W $mW/^\circ C$
	(Note 2)		6.72	
	(Note 3)		1.34	
	(Note 4)		10.72	
	(Note 5)		1.50	
Thermal Resistance Junction to Ambient	(Note 1)	$R_{\theta JA}$	12.0	$^\circ C/W$
	(Note 2)		2.0	
	(Note 3)		16.0	
	(Note 4)		149	
	(Note 5)		93	
Thermal Resistance, Junction to Lead		$R_{\theta JL}$	83	$^\circ C/W$
Junction Temperature		T_J	60	
Storage Temperature range		T_{stg}	43.8	$^\circ C$
			150	
			-55 to 150	

■ ESD Ratings (Note 6)

Parameter	JEDEC Class	Symbol	Rating	Unit
Electrostatic Discharge – Human Body Model	3A	ESD HBM	4,000	V
Electrostatic Discharge – Machine Model	C	ESD MM	400	

Notes: 1. For a device mounted with the exposed collector pad on 15mm x 15mm 1oz copper that is on a single-sided 1.6mm FR4 PCB; device is measured under still air conditions whilst operating in a steady-state.

2. Same as Note 1, except the device is mounted on 25mm x 25mm 2oz copper.

3. Same as Note 1, except the device is mounted on 50mm x 50mm 2oz copper.

4. Same as Note 3, whilst measured at $t < 5$ seconds.

5. Thermal resistance from junction to solder-point (at the end of the collector lead).

6. Refer to JEDEC specification JESD22-A114 and JESD22-A115.

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■ Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV _{CB0}	I _C = -100 μA	-110			V
Collector-Emitter Breakdown Voltage (Base Open)	BV _{CEX}	I _C = -100 μA, R _{BC} < 1 kΩ or 0.25V > V _{BC} > -0.25V	-110			
Collector-Emitter Breakdown Voltage (Base Open) (Note 7)	BV _{CEO}	I _C = -10 mA	-100			
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E = -100 μA	-7			
Emitter-Collector Breakdown Voltage	BV _{ECX}	I _E = -100 μA, R _{BC} < 1 kΩ or 0.25V > V _{BC} > -0.25V	-7			
Emitter-Collector Breakdown Voltage (Base Open)	BV _{ECO}	I _E = -100 μA	-7			
Collector-Base Cutoff Current	I _{CB0}	V _{CB} = -110V			-50	nA
		V _{CB} = -110V, T _A = +100°C			-0.5	μA
Emitter-Base Cutoff Current	I _{EBO}	V _{EB} = -5.6V			-50	nA
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C = -0.5A, I _B = -20mA			-130	mV
		I _C = -1A, I _B = -100mA			-120	
		I _C = -1A, I _B = -50mA			-225	
		I _C = -2A, I _B = -200mA			-275	
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C = -2A, I _B = -200mA			-950	
Base-Emitter On Voltage	V _{BE(ON)}	I _C = -2A, V _{CE} = -2V			-900	
Static Forward Current Transfer Ratio	h _{FE}	I _C = -100mA, V _{CE} = -2V	200		500	
		I _C = -1A, V _{CE} = -2V	70			
		I _C = -2A, V _{CE} = -2V	20			
Input Capacitance	C _{IB0}	V _{EB} = -0.5V, f = 1MHz		291	400	pF
Output Capacitance	C _{OB0}	V _{CB} = -1V, f = 1MHz		23.5		
Delay Time	t _d	V _{CC} = -10V, I _C = -0.5A, I _{B1} = -I _{B2} = -50mA		24.7		ns
Rise Time	t _r			22.4		
Storage Time	t _s			660		
Fall Time	t _f			107		
Transition Frequency	f _T	I _C = -100mA, V _{CE} = -10V, f = 50MHz		142		MHz

Note 7. Measured under pulsed conditions. Pulse width ≤ 300 μs. Duty cycle ≤ 2%.

■ Marking

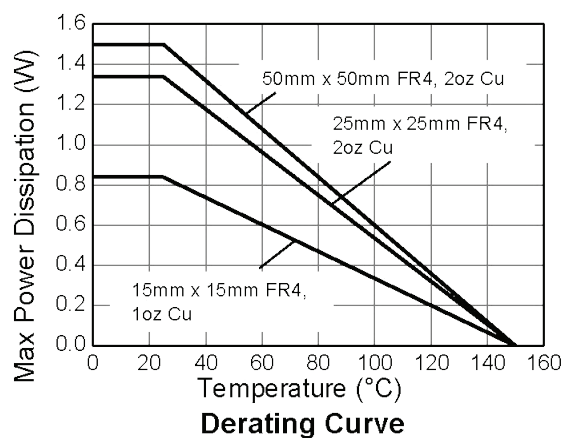
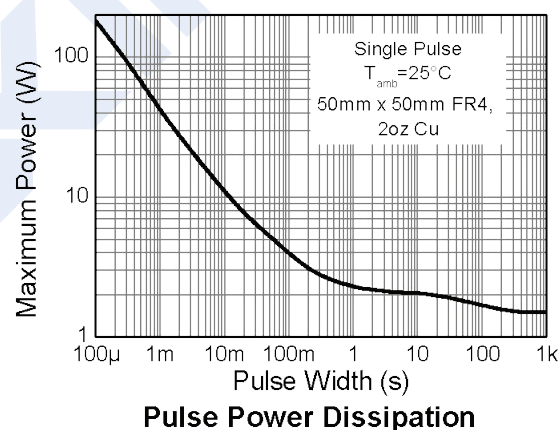
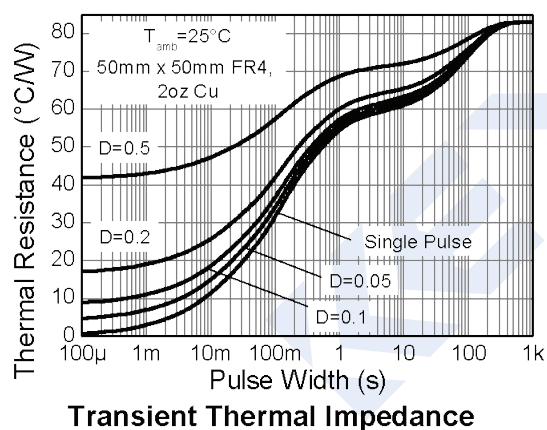
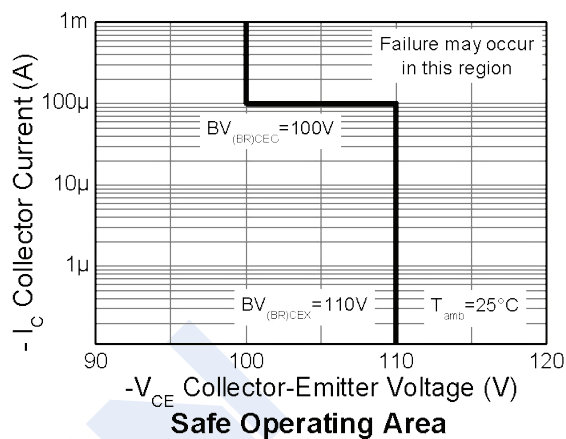
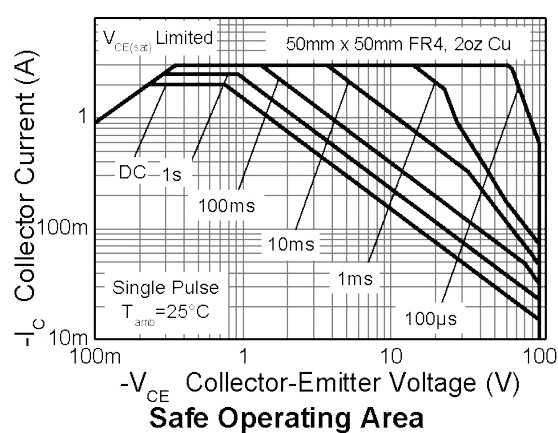
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** : Date Code

PNP Medium Power Transistor

ZXTP19100CFF

■ Thermal Characteristics and Derating Information



PNP Medium Power Transistor

ZXTP19100CFF

■ Typical Characteristics

