ZTX796A

PNP SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

Features

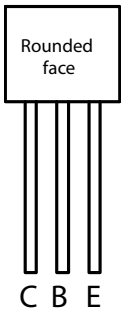
- 200 Volt V_{CEO}
- Gain of 250 at IC=0.3 Amps
- Very low saturation voltage

Mechanical Data

- Case: E-Line

E-Line
TO92 Compatible

Bottom View



Pin Configuration

Maximum Ratings

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-200	V
Collector-Emitter Voltage	V_{CEO}	-200	V
Emitter-Base Voltage	V_{EBO}	-5	V
Peak Pulse Current	I_{CM}	-1	A
Continuous Collector Current	I_C	-0.5	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Practical Power Dissipation (Note 1)	P_{totp}	1.5	W
Power Dissipation T_A = 25°C Derate above 25°C	P_{tot}	1 5.7	W mW /°C
Thermal Resistance Junction to Ambient$_1$ (Note 2)	$R_{\theta JA1}$	175	°C/W
Thermal Resistance Junction to Ambient$_2$ (Note 2)	$R_{\theta JA2}$	116	°C/W
Thermal Resistance Junction to Case	$R_{\theta JC}$	70	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +200	°C

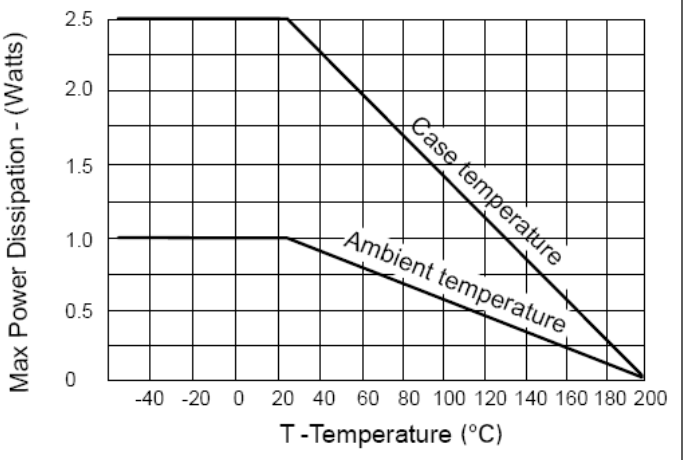
Notes: 1. The power which can be dissipated assuming the device is mounted in a typical manner on a P.C.B. with copper equal to 1 inch square minimum
2. Device mounted on P.C.B. with copper equal to 1 sq. Inch minimum.

PNP SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

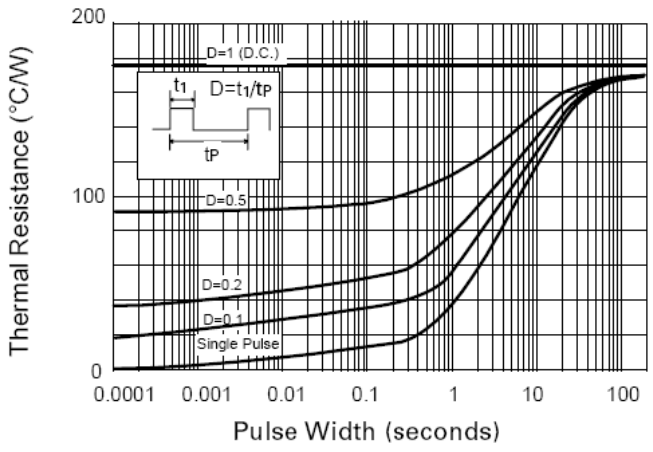
Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-200	-	-	V	I_C = -100µA
Collector-Emitter Breakdown Voltage (Note 3)	$V_{(BR)CEO}$	-200	-	-	V	I_C = -10mA
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	I_E = -100µA
Collector Cutoff Current	I_{CBO}	-	-	-0.1	µA	V_{CB} = -150V
Emitter Cutoff Current	I_{EBO}	-	-	-0.1	. µA	V_{EB} = -4V
Collector-Emitter Saturation Voltage (Note 3)	$V_{CE(sat)}$	-	-	-0.2 -0.3 -0.3	mV mV mV	I_C = -50mA, I_B = -2mA I_C = -100mA, I_B = -5mA I_C = -200mA, I_B = -20mA
Base-Emitter Saturation Voltage (Note 3)	$V_{BE(sat)}$	-	-	-0.95	mV	I_C = -200mA, I_B = -20mA
Base-Emitter Turn-On Voltage (Note 3)	$V_{BE(on)}$	-	-0.67		mV	I_C = -200mA, V_{CE} = -10V
Static Forward Current Transfer Ratio (Note 3)	h_{FE}	300 300 250 100	-	800		I_C = -10mA, V_{CE} = -5V I_C = -1A, V_{CE} = -5V I_C = -2A, V_{CE} = -5V I_C = -5A, V_{CE} = -5V
Transition Frequency	f_T	100	-	-	MHz	V_{CE} = -5V, I_C = -50mA f = 50MHz
Input Capacitance	C_{ibo}	-	225	-	pF	V_{EB} = -0.5V. f = 1MHz
Output Capacitance	C_{obo}	-	12	-	pF	V_{CB} = -10V. f = 1MHz
Switching Times	t_{on}	-	100	-	ns	V_{CC} = -50V, I_C = -100mA
	t_{off}	-	3200	-	ns	I_{B1} = -I_{B2} = -10mA

Notes: 3. Measured under pulsed conditions. Pulse width = 300 µs. Duty cycle ≤ 2%

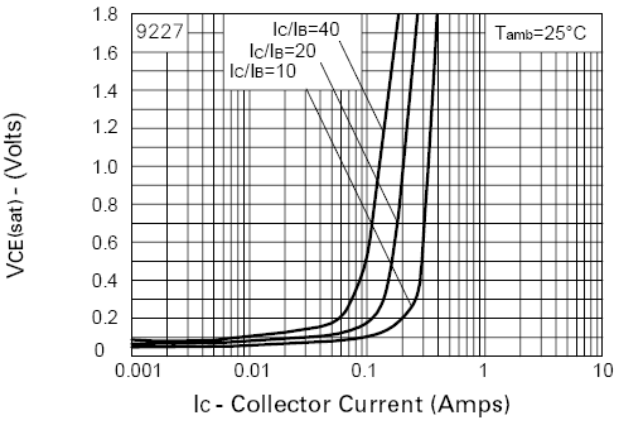


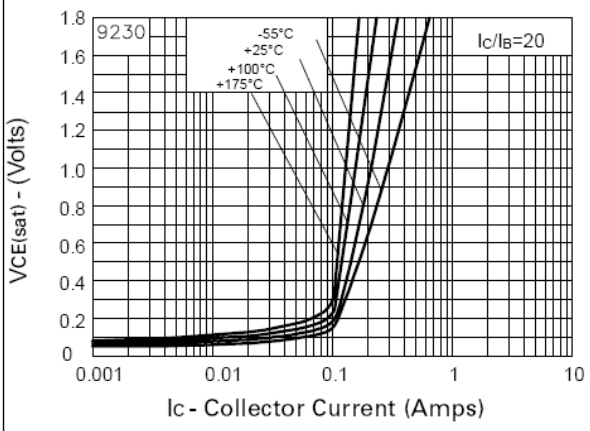
Derating curve

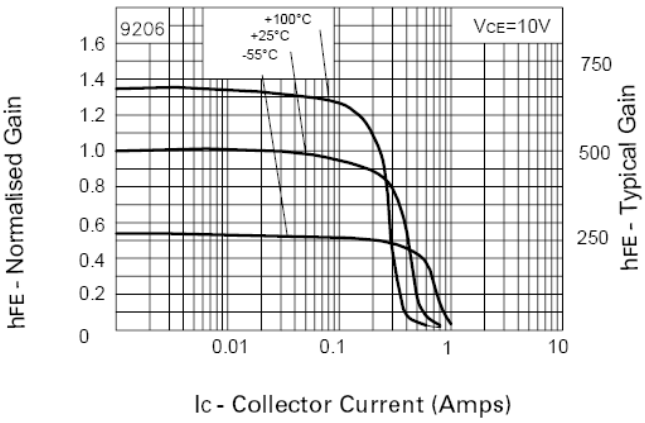


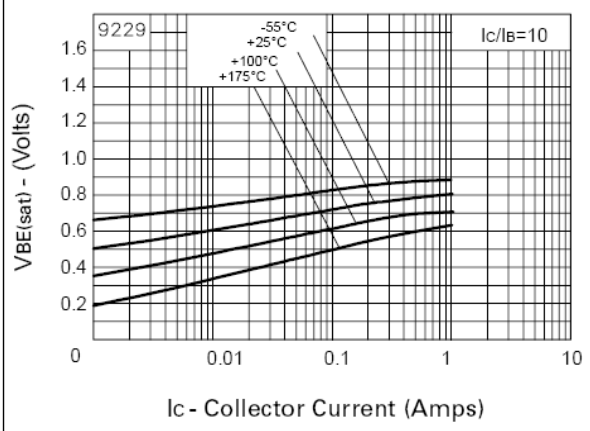
Maximum transient thermal impedance

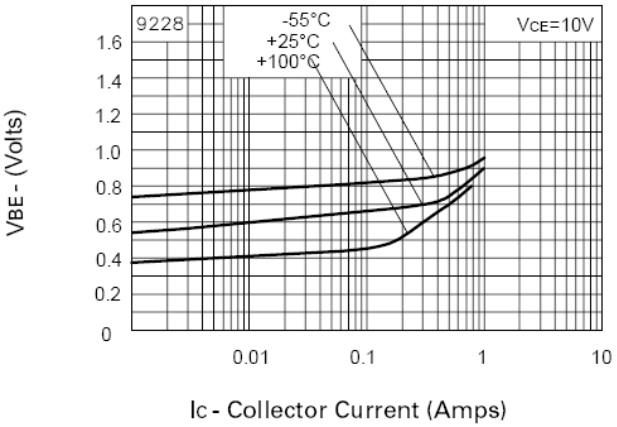
PNP SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

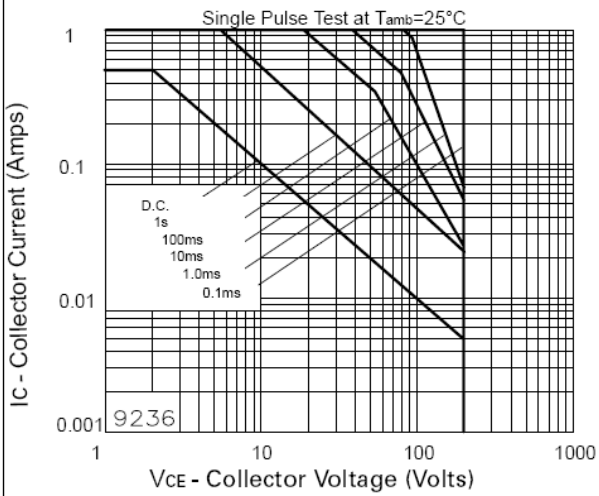












PNP SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR