

ZTX853

NPN SILICON PLANAR MEDIUM POWER
HIGH CURRENT TRANSISTOR
ZTX853

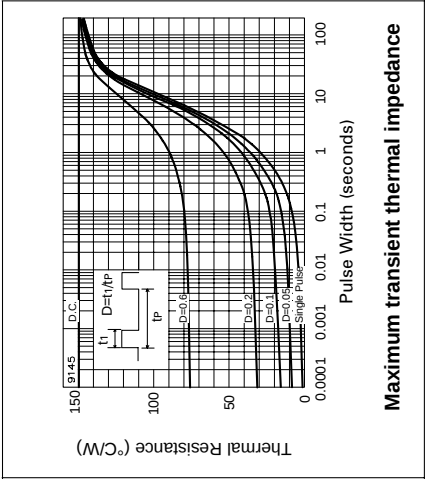
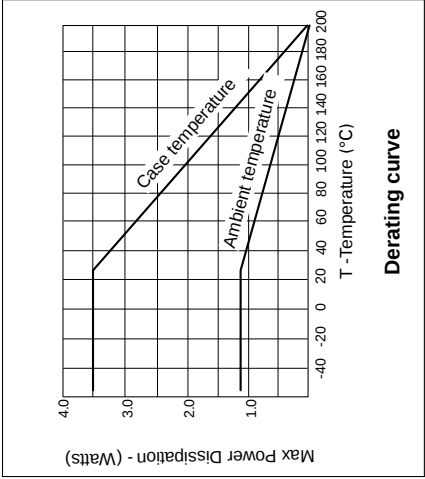
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Base-Emitter Turn-On Voltage	V _{BE(on)}		830	950	V	IC=4A, V _{CE} =2V*
Static Forward Current Transfer Ratio	h _{FE}	100	200	300		I _C =10mA, V _{CE} =2V
		100	200			I _C =2A, V _{CE} =2V*
		50	100			I _C =4A, V _{CE} =2V*
		20	30			I _C =10A, V _{CE} =2V*
Transition Frequency	f _T		130		MHz	I _C =100mA, V _{CE} =10V f=50MHz
Output Capacitance	C _{obo}		35		pF	V _{CE} =10V, f=1MHz
Switching Times	t _{on}		50		ns	I _C =1A, I _B =100mA
	t _{off}		1650		ns	I _{B2} =100mA, V _{CE} =10V

*Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤2%

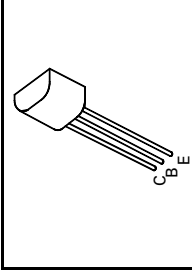
THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX.	UNIT
Thermal Resistance: Junction to Ambient Junction to Case	R _{th(j-amb)}	150	°C/W
	R _{th(j-case)}	50	°C/W



FEATURES

- * 100 Volt V_{CEO}
- * 4 Amps continuous current
- * Up to 10 Amps peak current
- * Very low saturation voltage
- * P_{tot}=1.2 Watts



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

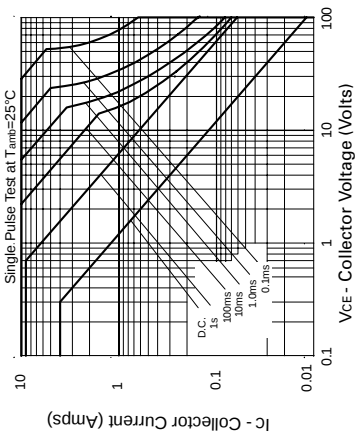
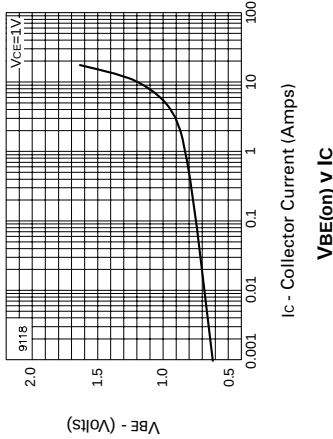
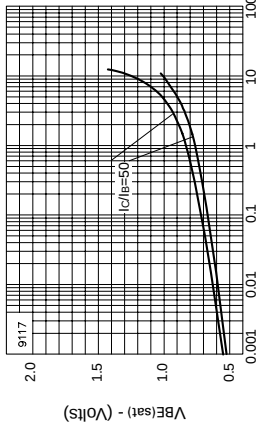
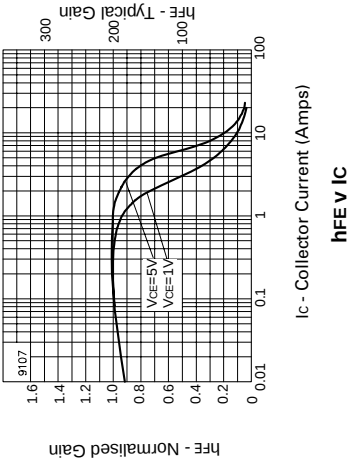
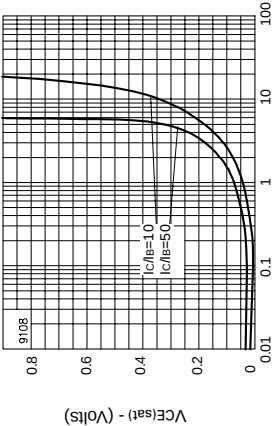
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V _{CBO}	200	V
Collector-Emitter Voltage	V _{CEO}	100	V
Emitter-Base Voltage	V _{EBO}	6	V
Peak Pulse Current	I _{CM}	10	A
Continuous Collector Current	I _C	4	A
Practical Power Dissipation *	P _{totp}	1.58	W
Power Dissipation at T _{amb} =25°C	P _{tot}	1.2	W
Operating and Storage Temperature Range	T _J ;Tstg	-55 to +200	°C

*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

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	V _{(BR)CBO}	200	300		V	I _C =100µA
Collector-Emitter Breakdown Voltage	V _{(BR)CER}	200	300		V	IC=1µA, RB ≤1KΩ
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	100	120		V	I _C =10mA*
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	6	8		V	I _E =100µA
Collector Cut-Off Current	I _{CBO}			50 1	nA µA	V _{CE} =150V V _{CE} =150V, T _{amb} =100°C
Collector Cut-Off Current	I _{CER} R ≤1KΩ			50 1	nA µA	V _{CE} =150V V _{CE} =150V, T _{amb} =100°C
Emitter Cut-Off Current	I _{EBO}			10	nA	V _{EB} =6V
Collector-Emitter Saturation Voltage	V _{CE(sat)}		14 100 160	50 150 200	mV mV mV	I _C =0.1A, I _B =5mA
						I _C =2A, I _B =100mA
						I _C =4A, I _B =400mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}		960	1100	mV	I _C =4A, I _B =400mA*

TYPICAL CHARACTERISTICS



Safe Operating Area