THE DATASHEET OF

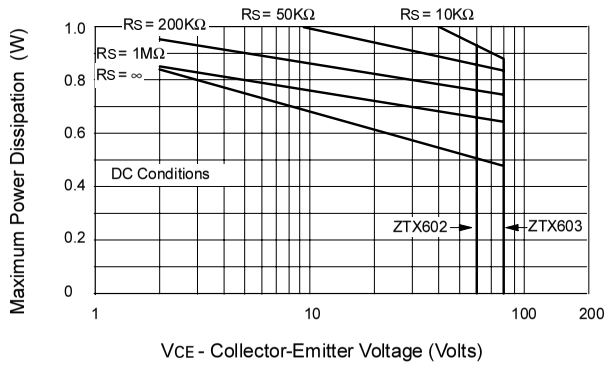
ZTX603

ZTX602
ZTX603

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

PARAMETER	SYMBOL	ZTX602		ZTX603		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Static Forward Current Transfer Ratio	h_{FE}	2K 5K 2K 0.5K	100K	2K 5K 2K 0.5K	100K		I_C=50mA, V_{CE}=5V I_C=500mA, V_{CE}=5V* I_C=1A, V_{CE}=5V* I_C=2A, V_{CE}=5V*
Transition Frequency	f_T	150		150		MHz	I_C=100mA, V_{CE}=10V f=20MHz
Input Capacitance	C_{ibo}	90 Typical				pF	V_{EB}=500mV, f=1MHz
Output Capacitance	C_{obo}	15 Typical				pF	V_{CB}=10V, f=1MHz
Switching Times	t_{on}	0.5 Typical				µs	I_C=500mA, V_{CE}=10V I_{B1}=I_{B2}=0.5mA
	t_{off}	1.1 Typical				µs	

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



Voltage Derating Graph

The maximum permissible operational temperature can be obtained from this graph using the following equation

$$T_{amb(max)} = \frac{Power(max) - Power(act)}{0.0057} + 25°C$$

$T_{amb(max)}$= Maximum operating ambient temperature

Power(max) = Maximum power dissipation figure, obtained from the above graph for a given V_{CE} and source resistance (R_S)

Power(actual)= Actual power dissipation in users circuit

NPN SILICON PLANAR ME
DARLINGTON TRANSISTO

ISSUE 1 – MARCH 94

FEATURES

* 80 Volt V_{CEO}
* 1 Amp continuous current
* Gain of 2K at I_C=1 Amp
* P_{tot}= 1 Watt

ABSOLUTE MAXIMUM RATINGS

PARAMETER
Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Peak Pulse Current
Continuous Collector Current
Power Dissipation at T_{amb}= 25°C derate above 25°C
Operating and Storage Temperature R

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	
		MIN.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	80
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	60
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	10
Collector Cut-Off Current	I_{CBO}	
Emitter Cut-Off Current	I_{EBO}	
Colllector-Emitter Cut-Off Current	I_{CES}	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	

ZTX602
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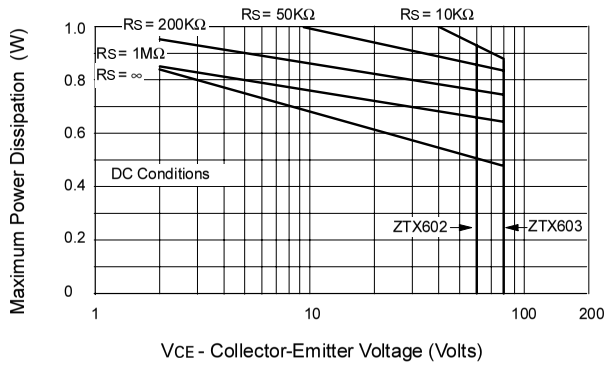

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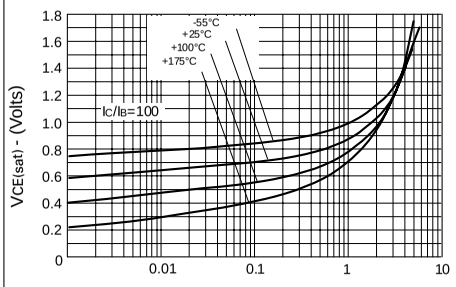
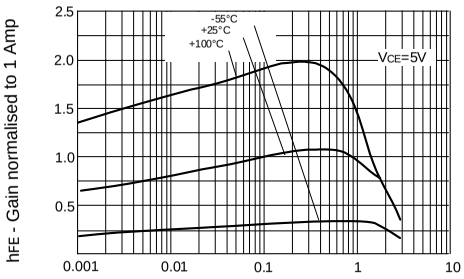
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	

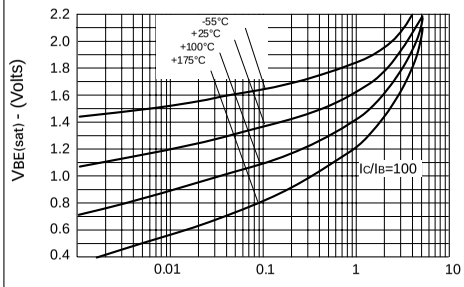
TYPICAL CHARACTERISTICS



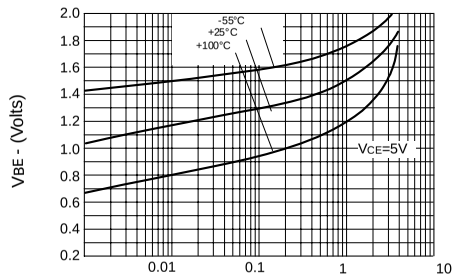
VCE(sat) v IC



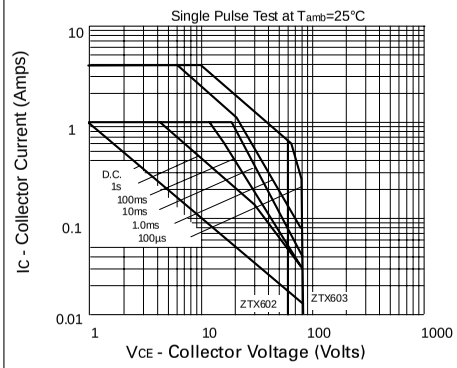
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area

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- Diodes Incorporated Information

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- Shortage Management
- Alternative Solution
- Excess Inventory Management