

PNP Silicon Planar Medium Power Transistors

ZTX550
ZTX551

FEATURES

- High power dissipation: 1W at $T_{amb} = 25^{\circ}\text{C}$
- h_{FE} specified up to 1A
- High f_T : 200MHz typical

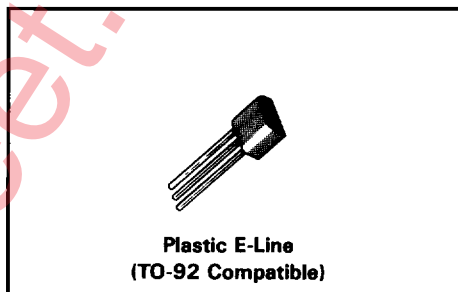
DESCRIPTION

These are plastic encapsulated, general purpose transistors designed for small and medium signal amplification from d.c. to radio frequencies.

Application areas include: audio frequency amplifiers, driver and output stages, oscillators and general purpose switching.

The E-line package is formed by transfer moulding a silicone plastic specially selected to provide a rugged one-piece encapsulation resistant to severe environments and allow the high junction temperature operation normally associated with metal can devices.

E-line encapsulated devices are approved for use in military, industrial and professional equipments.



Alternative lead configurations are available as plug-in replacements of TO-5/39 and TO-18 metal can types, and for surface mounting.

Complementary to ZTX450 and ZTX451 NPN transistors.

The ZTX550 and ZTX551 transistors approved for use in military equipment are identified by the following numbers:

BS9365 F143 & F144 - Category F.

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	ZTX550	ZTX551	Unit
Collector-base voltage	V_{CBO}	- 60	- 80	V
Collector-emitter voltage	V_{CEO}	- 45	- 60	V
Emitter-base voltage	V_{EBO}	- 5		V
Peak pulse current (see note below)	I_{CM}	- 2		A
Continuous collector current	I_C	- 1		A
Base current	I_B	- 200		mA
Power dissipation at $T_{amb} = 25^{\circ}\text{C}$ at $T_{case} = 25^{\circ}\text{C}$	P_{tot}	1 2		W W
Operating and storage temperature range		- 55 to + 200		$^{\circ}\text{C}$

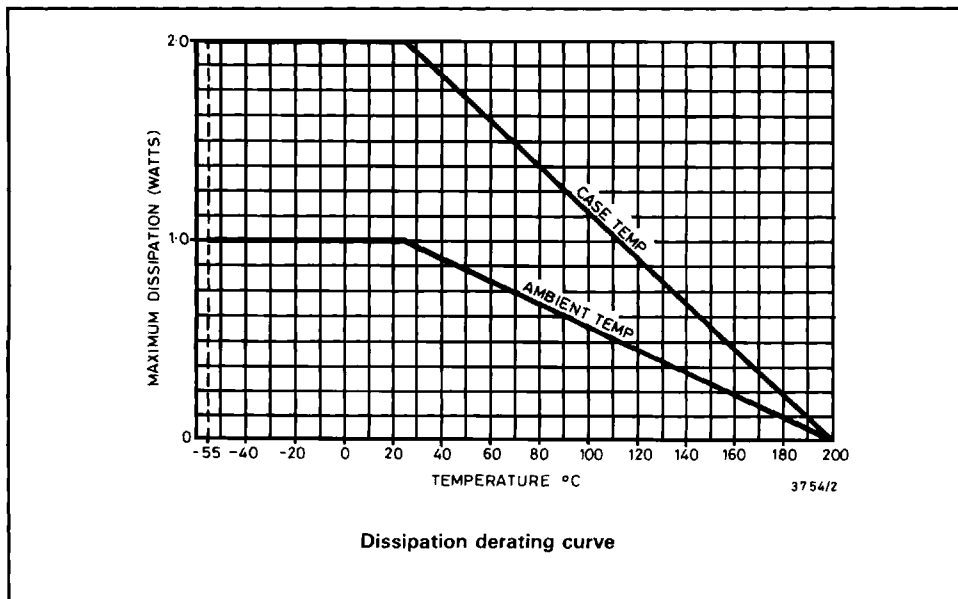
Note: Consult Safe Operating Area graph for conditions.

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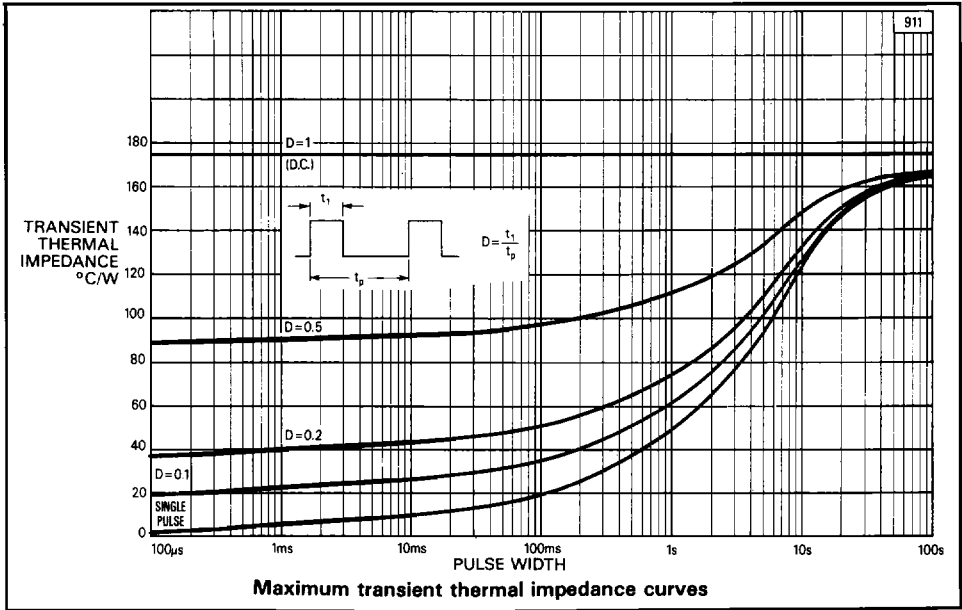
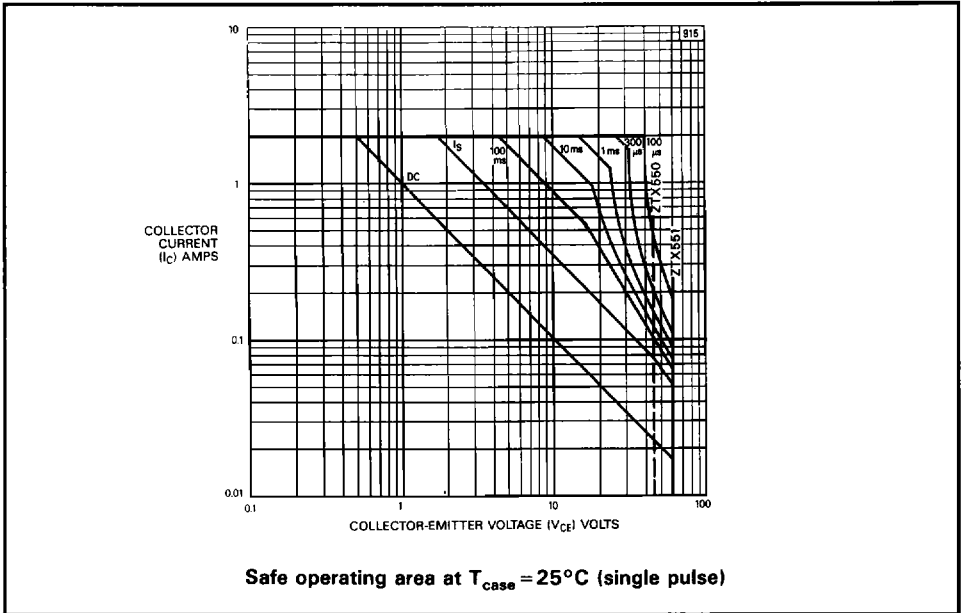
CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated).

Parameter	Symbol	ZTX550		ZTX551		Unit	Conditions
		Min.	Max.	Min.	Max.		
Collector-base cut-off current	I_{CBO}	-	-0.1	-	-	μA	$V_{CB} = -45\text{V}$
		-	-	-	-0.1	μA	$V_{CB} = -60\text{V}$
Emitter-base cut-off current	I_{EBO}	-	-0.1	-	-0.1	μA	$V_{EB} = -4\text{V}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-0.25	-	-0.35	V	$I_C = -150\text{mA}$, $I_B = -15\text{mA}^*$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-1.1	-	-1.1	V	$I_C = -150\text{mA}$, $I_B = -15\text{mA}^*$
Collector-emitter sustaining voltage	$V_{CEO(sus)}$	-45	-	-60	-	V	$I_C = -10\text{mA}^*$
Static forward current transfer ratio	h_{FE}	100	300	50	150		$I_C = -150\text{mA}$, $V_{CE} = -10\text{V}^*$
		15	-	10	-		$I_C = -1\text{A}$, $V_{CE} = -10\text{V}^*$
Transition frequency	f_T	150	-	150	-	MHz	$I_C = -50\text{mA}$, $V_{CE} = -10\text{V}$ $f = 100\text{MHz}$
Output capacitance	C_{obo}	-	25	-	25	pF	$V_{CB} = -10\text{V}$, $f = 1\text{MHz}$

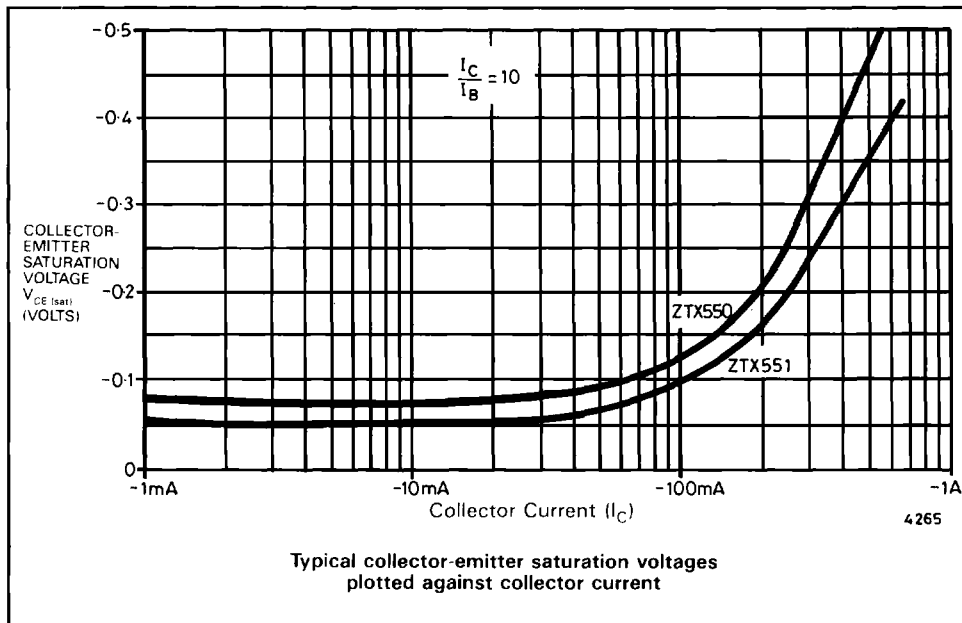
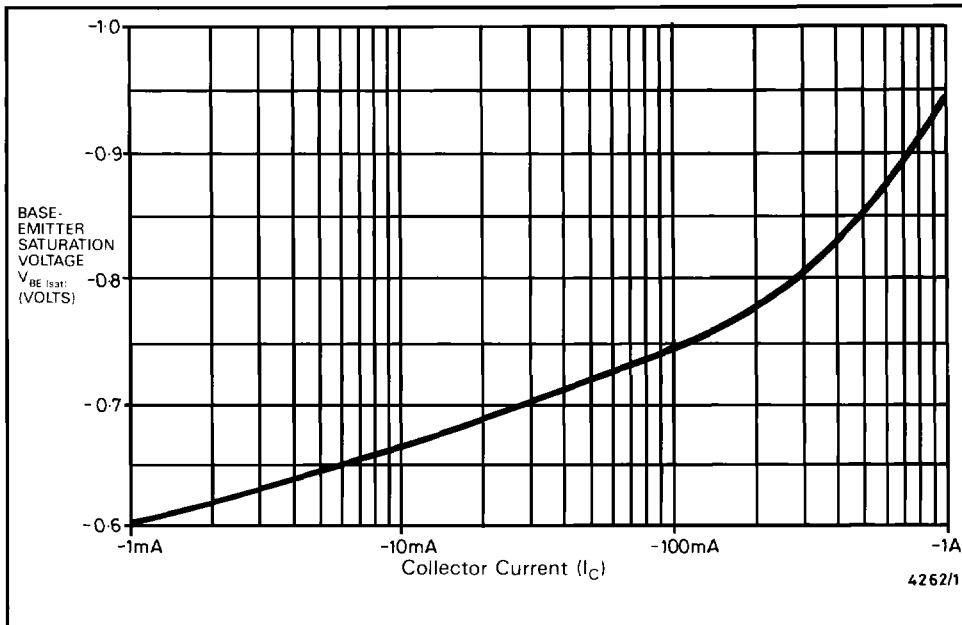
*Measured under pulsed conditions. Pulse width = $300\mu\text{s}$. Duty cycle $\leq 2\%$.



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