

# 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

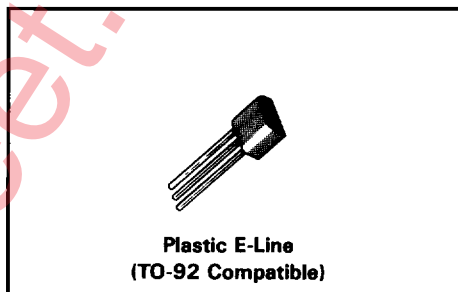
## DESCRIPTION

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		$^{\circ}\text{C}$

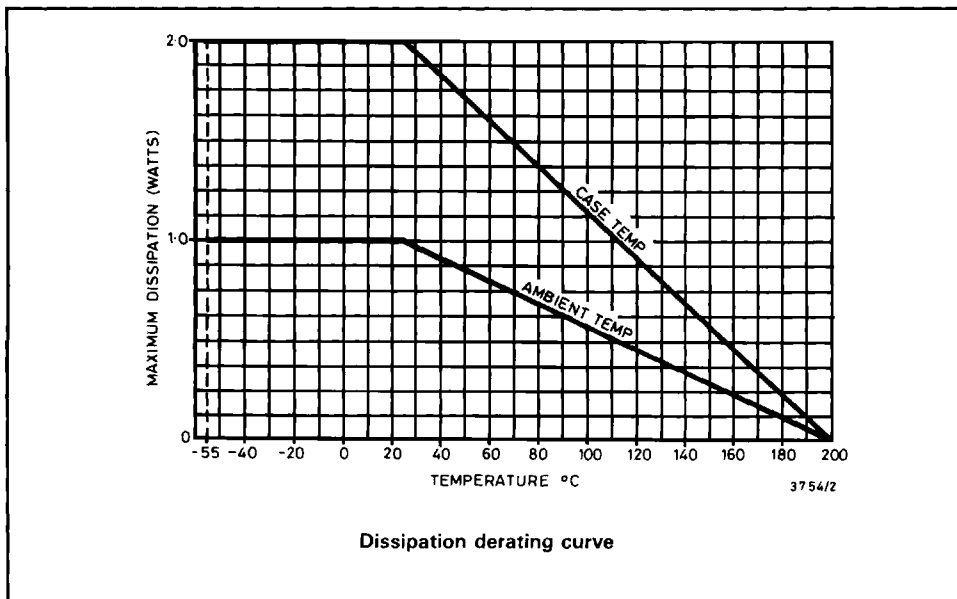
Note: Consult Safe Operating Area graph for conditions.

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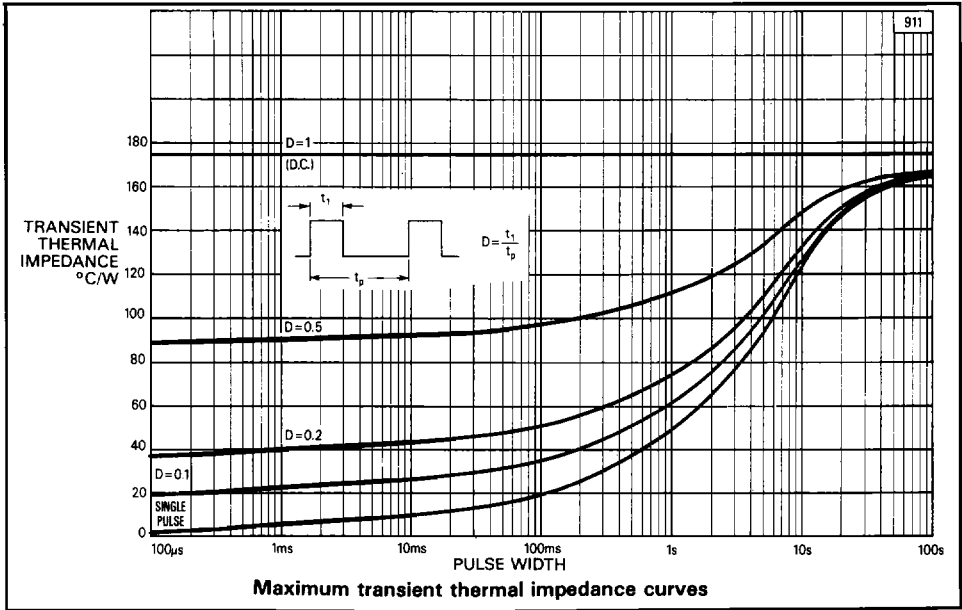
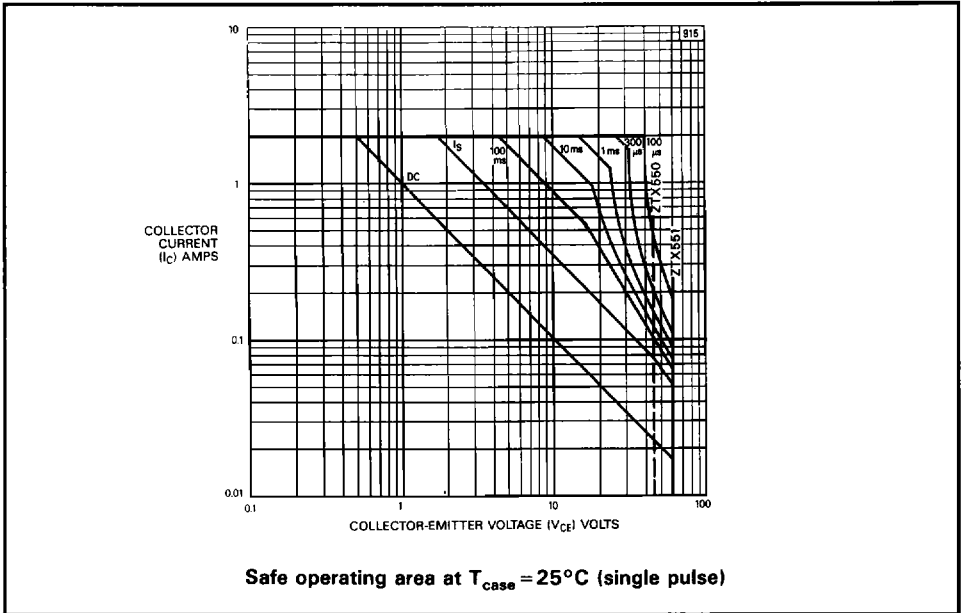
CHARACTERISTICS (at  $T_{amb} = 25^{\circ}\text{C}$  unless otherwise stated).

Parameter	Symbol	ZTX550		ZTX551		Unit	Conditions
		Min.	Max.	Min.	Max.		
Collector-base cut-off current	$I_{CBO}$	-	-0.1	-	-	$\mu\text{A}$	$V_{CB} = -45\text{V}$
		-	-	-	-0.1	$\mu\text{A}$	$V_{CB} = -60\text{V}$
Emitter-base cut-off current	$I_{EBO}$	-	-0.1	-	-0.1	$\mu\text{A}$	$V_{EB} = -4\text{V}$
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	$V_{CB} = -10\text{V}$ , $f = 1\text{MHz}$

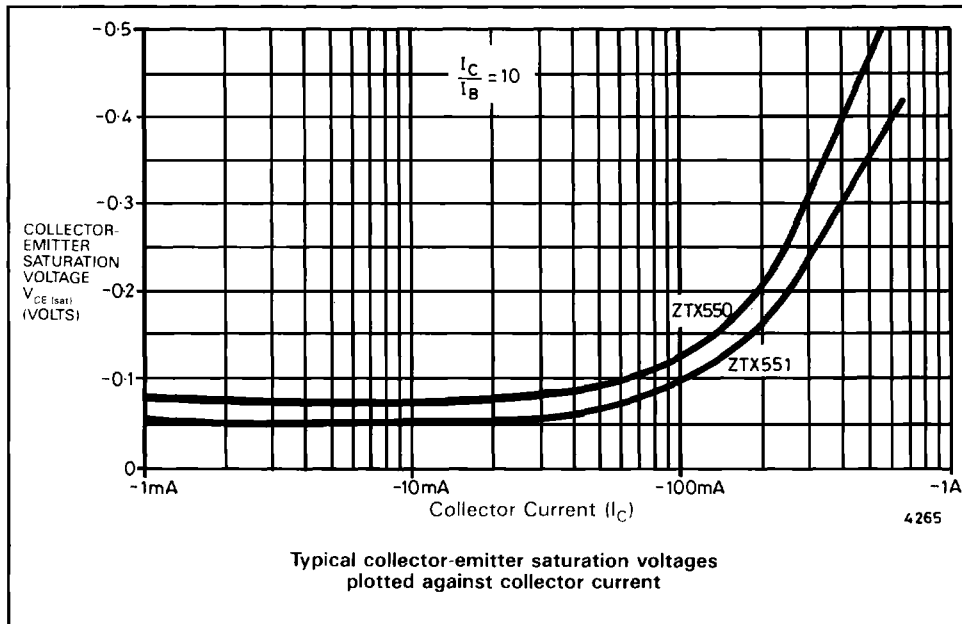
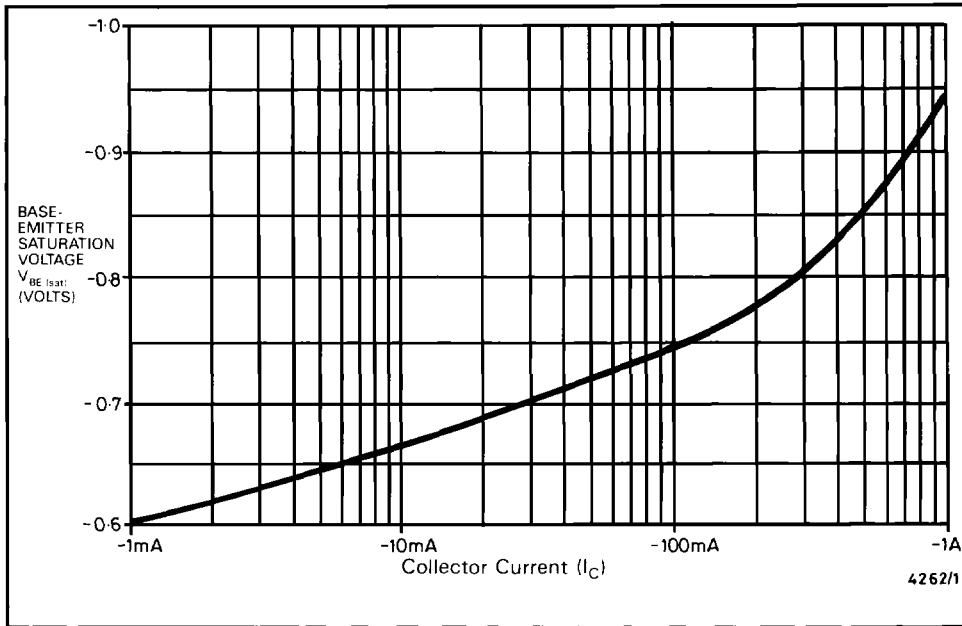
\*Measured under pulsed conditions. Pulse width =  $300\mu\text{s}$ . Duty cycle  $\leq 2\%$ .



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