



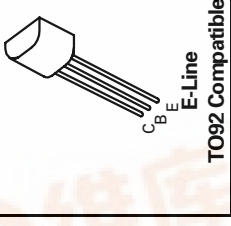
NPN SILICON PLANAR RF TRANSISTOR

ZTX325

ISSUE 2 – MARCH 94

FEATURES

- * High f_T , 1.3GHz
- * Low noise < 5dB at 500MHz
- * Power output at 500MHz > 175mW



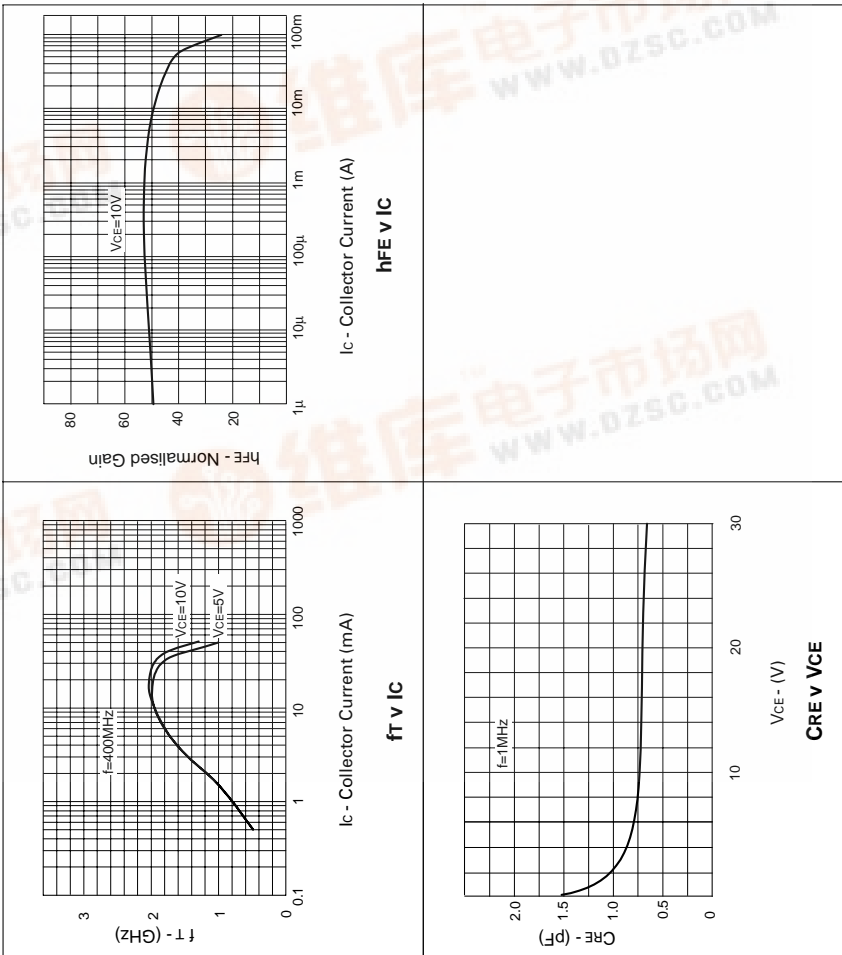
[查询ZTX325供应商](#)

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Noise Figure	N			5.0	dB	$f=500\text{MHz}$, $V_{CE}=5\text{V}$, $I_C=2\text{mA}$, $R_S=50\Omega$
Intermodulation Distortion	d_{im}		-53		dB	$I_C=14\text{mA}$, $V_{CE}=6\text{V}$, $f=217\text{MHz}$, $V_{\sigma}=100\text{mV}$, $R_L=37.5\Omega$, $f_1=183\text{MHz}$, $f_2=200\text{MHz}$
Output Power (at $T_{case}=25^\circ\text{C}$)*	P_O	175			mW	$V_{CE}=13.5\text{V}$, $I_C=22.5\text{mA}$, $P_{in}=25\text{mW}$, $f=500\text{MHz}$

It is essential that care be taken to reduce steady state current when no h. f. signal is applied.

TYPICAL CHARACTERISTICS



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	2.5	V
Mean Collector Current (Averaged over 100 μ s)	I_{AV}	25	mA
Collector Current	I_{CM}	50	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	350	mW
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +200	$^\circ\text{C}$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	15			V	$I_C=10\text{mA}$, $I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=10\mu\text{A}$, $I_C=0$
Collector Cut-Off Current	I_{CBO}			10	nA	$V_{CB}=15\text{V}$, $I_E=0$
Emitter Cut-Off Current	I_{CES}			10	μA	$V_{CE}=15\text{V}$, $V_{BE}=0$
Static Forward Current Transfer Ratio	h_{FE}	25 20		150 125		$I_C=2\text{mA}$, $V_{CE}=1\text{V}$ $I_C=25\text{mA}$, $V_{CE}=1\text{V}$ *
Transition Frequency	f_T	1.0 1.3			GHz GHz	$I_C=2\text{mA}$, $V_{CE}=5\text{V}$, $f=400\text{MHz}$ $I_C=25\text{mA}$, $V_{CE}=5\text{V}$, $f=400\text{MHz}$
Capacitance, Collector Depletion Layer	C_{TC}			1.5	pF	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$
Capacitance, Emitter Depletion Layer	C_{TE}			2.0	pF	$VEB=0.5\text{V}$, $I_C=0$, $f=1\text{MHz}$
Feedback Capacitance	$-C_{re}$		0.85		pF	$V_{CE}=5\text{V}$, $I_C=2\text{mA}$, $f=1\text{MHz}$
Feedback Time Constant	$r_{bb}'C_{b,c}$	2.0		12	ps	$V_{CB}=5\text{V}$, $I_E=2\text{mA}$, $f=10.7\text{MHz}$

[捷多邦, 专业PCB打样工厂, 24小时加急出货](#)

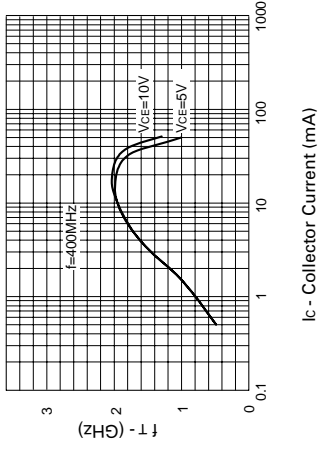
ISSUE 2 – MARCH 94

ELECTRICAL CHARACTERISTICS

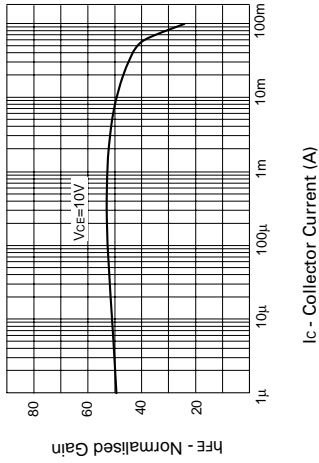
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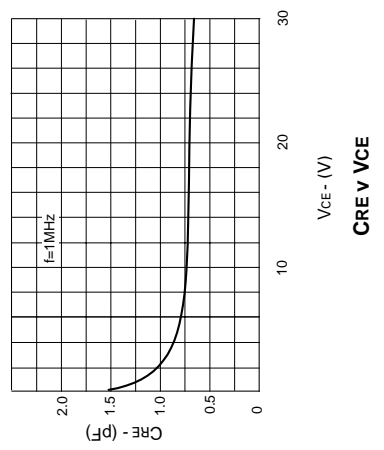
TYPICAL CHARACTERISTICS



fT v IC



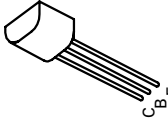
hFE v IC



CRE v VCE

FEATURES

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**E-Line
TO92 Compatible**

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Collector Cut-Off Current	I_{CBO}			10	nA	$V_{CB}=15\text{V}$, $I_E=0$
Emitter Cut-Off Current	I_{CES}			10	μA	$V_{CE}=15\text{V}$, $V_{BE}=0$
Static Forward Current Transfer Ratio	h_{FE}	25 20		150 125		$I_C=2\text{mA}$, $V_{CE}=1\text{V}^*$, $I_C=25\text{mA}$, $V_{CE}=1\text{V}^*$
Transition Frequency	f_T	1.0 1.3			GHz GHz	$I_C=2\text{mA}$, $V_{CE}=5\text{V}$, $f=400\text{MHz}$, $I_C=25\text{mA}$, $V_{CE}=5\text{V}$, $f=400\text{MHz}$
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Feedback Capacitance	$-C_{re}$		0.85		pF	$V_{CE}=5\text{V}$, $I_C=2\text{mA}$, $f=1\text{MHz}$
Feedback Time Constant	$r_{bb}'C_{b,c}'$	2.0		12	ps	$V_{CB}=5\text{V}$, $I_E=2\text{mA}$, $f=10.7\text{MHz}$