

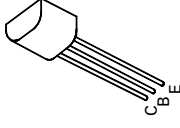
**NPN SILICON PLANAR  
SMALL SIGNAL TRANSISTOR**

ISSUE 2 – MARCH 94

**FEATURES**

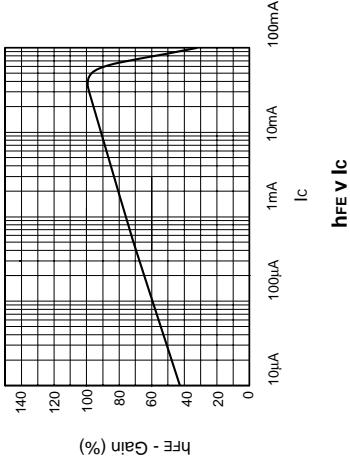
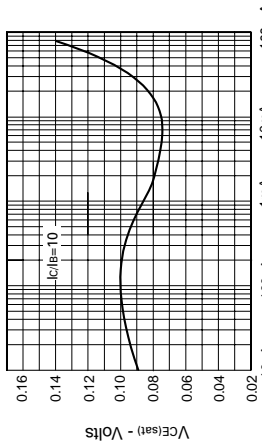
- \* High voltage
- \* Low current

**ZTX341**



**E-Line  
TO92 Compatible**

**TYPICAL CHARACTERISTICS**



**V<sub>CE(sat)</sub> v I<sub>C</sub>**

**h<sub>FE</sub> v I<sub>C</sub>**

**ZTX341**

**ABSOLUTE MAXIMUM RATINGS.**

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	100	V
Collector-Emitter Voltage	V <sub>CE0</sub>	100	V
Emitter-Base Voltage	V <sub>EB0</sub>	5	V
Continuous Collector Current	I <sub>C</sub>	100	mA
Base Current	I <sub>B</sub>	20	mA
Power Dissipation at T <sub>amb</sub> =25°C	P <sub>tot</sub>	300	mW
Operating and Storage Temperature Range	T <sub>J</sub> ; T <sub>stg</sub>	-55 to +175	°C

**ELECTRICAL CHARACTERISTICS (at T<sub>amb</sub> = 25°C unless otherwise stated).**

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	V <sub>(BR)CB0</sub>	100		V	I <sub>C</sub> =10µA, I <sub>E</sub> =0
Collector-Emitter Breakdown Voltage	V <sub>(BR)CE0</sub>	100		V	I <sub>C</sub> =10mA, I <sub>B</sub> =0
Emitter-Base Breakdown Voltage	V <sub>(BR)EB0</sub>	5		V	I <sub>E</sub> =10µA, I <sub>C</sub> =0
Collector Cut-Off Current	I <sub>CB0</sub>		0.5	µA	V <sub>CB</sub> =80V, I <sub>E</sub> =0
Collector-Emitter Cut-Off Current	I <sub>CE0</sub>		0.5 10	µA	V <sub>CE</sub> =80V, R <sub>BE</sub> =50KΩ V <sub>CE</sub> =80V, R <sub>BE</sub> =50KΩ†
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>		0.5	V	I <sub>C</sub> =2mA, I <sub>B</sub> =0.1mA
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>		1.0	V	I <sub>C</sub> =2mA, I <sub>B</sub> =0.1mA
Static Forward Current Transfer Ratio	h <sub>FE</sub>	30			I <sub>C</sub> =2mA, V <sub>CE</sub> =1V
Transition Frequency	f <sub>T</sub>	80		MHz	I <sub>C</sub> =5mA, V <sub>CE</sub> =5V f=60MHz
Output Capacitance	C <sub>obo</sub>		10	pF	V <sub>CB</sub> =6V, f=1MHz

\*Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤ 2%  
†T<sub>amb</sub>=100°C

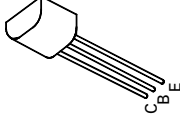
# NPN SILICON PLANAR SMALL SIGNAL TRANSISTOR

ISSUE 2 – MARCH 94

## FEATURES

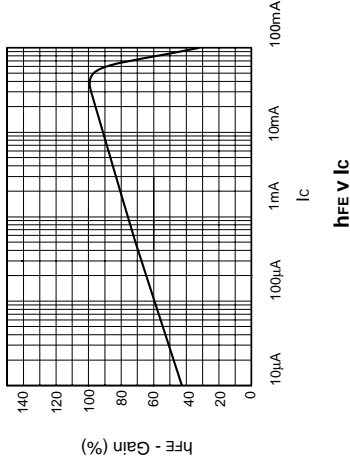
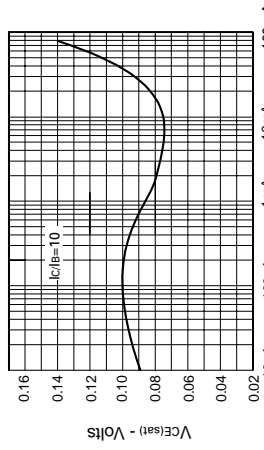
- \* High voltage
- \* Low current

# ZTX341



E-Line  
TO92 Compatible

## TYPICAL CHARACTERISTICS



## ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CB0}$	100	V
Collector-Emitter Voltage	$V_{CEO}$	100	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Continuous Collector Current	$I_C$	100	mA
Base Current	$I_B$	20	mA
Power Dissipation at $T_{amb}=25^\circ C$	$P_{tot}$	300	mW
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 to +175	$^\circ C$

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CB0}$	100		V	$I_C=10\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	100		V	$I_C=10mA, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		V	$I_E=10\mu A, I_C=0$
Collector Cut-Off Current	$I_{CBO}$		0.5	$\mu A$	$V_{CB}=80V, I_E=0$
Collector-Emitter Cut-Off Current	$I_{CER}$		0.5 10	$\mu A$ $\mu A$	$V_{CE}=80V, R_{BE}=50K\Omega$ $V_{CE}=80V, R_{BE}=50K\Omega, \dagger$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.5	V	$I_C=2mA, I_B=0.1mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.0	V	$I_C=2mA, I_B=0.1mA$
Static Forward Current Transfer Ratio	$h_{FE}$	30			$I_C=2mA, V_{CE}=1V$
Transition Frequency	$f_T$	80		MHz	$I_C=5mA, V_{CE}=5V$ $f=60MHz$
Output Capacitance	$C_{obo}$		10	pF	$V_{CB}=6V, f=1MHz$

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

$\dagger T_{amb}=100^\circ C$

# ZTX341

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