

# PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

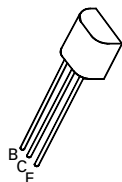
## FXT549

ISSUE 1 – SEPT 93

### FEATURES

- \* 30 Volt  $V_{CE0}$
- \* 1 Amp continuous current
- \*  $P_{tot} = 1$  Watt

REFER TO ZTX549 FOR GRAPHS



**E-Line**  
**T092 Compatible**

### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-35	V
Collector-Emitter Voltage	$V_{CEO}$	-30	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Peak Pulse Current	$I_{CM}$	-2	A
Continuous Collector Current	$I_C$	-1	A
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	1	W
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-Base Breakdown Voltage	$V_{(BR)CBO}$	-35			V	$I_C = -100\mu\text{A}$ , $I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-30			V	$I_C = -10\text{mA}$ , $I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -100\mu\text{A}$ , $I_C = 0$
Collector Cut-Off Current	$I_{CBO}$			-0.1 -10	$\mu\text{A}$ $\mu\text{A}$	$V_{CB} = -30\text{V}$ $V_{CB} = -30\text{V}$ , $T_{amb} = 100^\circ\text{C}$
Emitter Cut-Off Current	$I_{EBO}$			-0.1	$\mu\text{A}$	$V_{EB} = -4\text{V}$ , $I_C = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.25 -0.50	-0.50 -0.75	V V	$I_C = -1\text{A}$ , $I_B = -100\text{mA}^*$ $I_C = -2\text{A}$ , $I_B = -200\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.90	-1.25	V	$I_C = -1\text{A}$ , $I_B = -100\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-0.85	-1	V	$I_C = -1\text{A}$ , $V_{CE} = -2\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	70 100 80 40	200 160 130 80	300		$I_C = -50\text{mA}$ , $V_{CE} = -2\text{V}^*$ $I_C = -500\text{mA}$ , $V_{CE} = -2\text{V}^*$ $I_C = -1\text{A}$ , $V_{CE} = -2\text{V}^*$ $I_C = -2\text{A}$ , $V_{CE} = -2\text{V}^*$
Transition Frequency	$f_T$	100			MHz	$I_C = -100\text{mA}$ , $V_{CE} = -5\text{V}$ $f = 100\text{MHz}$
Output Frequency	$C_{obo}$			25	pF	$V_{CB} = -10\text{V}$ , $f = 1\text{MHz}$

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