

# PNP SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTOR

## FXT704

ISSUE 1 – FEB 94

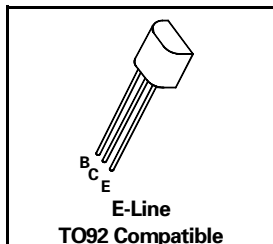
### FEATURES

- \* 100 Volt  $V_{CE0}$
- \* Gain of 3K at  $I_C=1$  Amp
- \*  $P_{tot} = 1$  Watt

### APPLICATIONS

- \* Lamp, solenoid and relay drivers
- \* Replacement of TO126 and TO220 darlington transistors

REFER TO ZTX704 FOR GRAPHS



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-120	V
Collector-Emitter Voltage	$V_{CEO}$	-100	V
Emitter-Base Voltage	$V_{EBO}$	-10	V
Peak Pulse Current	$I_{CM}$	-4	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	$V_{(BR)CBO}$	-120			V	$I_C=-100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-100			V	$I_C=-10\text{mA}, I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-10			V	$I_E=-100\mu\text{A}, I_C=0$
Collector Cut-Off Current	$I_{CBO}$			-0.1 -10	$\mu\text{A}$ $\mu\text{A}$	$V_{CB}=-100\text{V}, I_E=0$ $V_{CB}=-100\text{V}, T_{amb}=100^\circ\text{C}$
Collector Cut-Off Current	$I_{CES}$			-10	$\mu\text{A}$	$V_{CES}=-80\text{V}$
Emitter Cut-Off Current	$I_{EBO}$			-0.1	$\mu\text{A}$	$V_{EB}=-8\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-1.3 -2.5	V V	$I_C=-1\text{A}, I_B=-1\text{mA}^*$ $I_C=-2\text{A}, I_B=-2\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.8	V	$I_C=-1\text{A}, I_B=-10\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			-1.7	V	$I_C=-1\text{A}, V_{CE}=-5\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	3k 3k 3k 2k		30k		$I_C=-10\text{mA}, V_{CE}=-5\text{V}^*$ $I_C=-100\text{mA}, V_{CE}=-5\text{V}^*$ $I_C=-1\text{A}, V_{CE}=-5\text{V}^*$ $I_C=-2\text{A}, V_{CE}=-5\text{V}^*$
Transition Frequency	$f_T$		160		MHz	$I_C=-100\text{mA}, V_{CE}=-10\text{V}$ $f=20\text{MHz}$