

# PNP SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTOR

## FXT705

ISSUE 1 – FEB 94

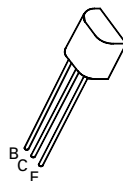
### FEATURES

- \* 120 Volt  $V_{CEO}$
- \* Gain of 3K at  $I_C=1$  Amp
- \*  $P_{tot} = 1$  Watt

### APPLICATIONS

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

REFER TO ZTX705 FOR GRAPHS



E-Line  
TO92 Compatible

### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-140	V
Collector-Emitter Voltage	$V_{CEO}$	-120	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 $T_{amb}=25^{\circ}C$	$P_{tot}$	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +200	$^{\circ}C$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-140			V	$I_C = -100\mu A, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-120			V	$I_C = -10mA, I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-10			V	$I_E = -100\mu A, I_C = 0$
Collector Cut-Off Current	$I_{CBO}$			-0.1 -10	$\mu A$ $\mu A$	$V_{CB} = -120V, I_E = 0$ $V_{CB} = -120V, T_{amb} = 100^{\circ}C$
Collector Cut-Off Current	$I_{CES}$			-10	$\mu A$	$V_{CE} = -80V$
Emitter Cut-Off Current	$I_{EBO}$			-0.1	$\mu A$	$V_{EB} = -8V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-1.3 -2.5	V V	$I_C = -1A, I_B = -1mA^*$ $I_C = -2A, I_B = -2mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.8	V	$I_C = -1A, I_B = -10mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			-1.7	V	$I_C = -1A, V_{CE} = -5V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	3k 3k 3k 2k		30k		$I_C = -10mA, V_{CE} = -5V^*$ $I_C = -100mA, V_{CE} = -5V^*$ $I_C = -1A, V_{CE} = -5V^*$ $I_C = -2A, V_{CE} = -5V^*$
Transition Frequency	$f_T$		160		MHz	$I_C = -100mA, V_{CE} = -10V$ $f = 20MHz$