

NPN SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTOR

ISSUE 1 – SEPT 93

FEATURES

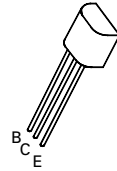
- * 120 Volt V_{CEO}
- * Gain of 2K at $I_C=1$ Amp
- * $P_{tot}=1$ Watt

APPLICATIONS

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

REFER TO ZTX605 FOR GRAPHS

FXT605



**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}			0.01 10	μA	$V_{CB}=120V, I_E=0$ $V_{CB}=120V, T_{amb}=100^{\circ}C$
Emitter Cut-Off Current	I_{EBO}			0.1	μA	$V_{EB}=8V, I_C=0$
Collector-Emitter Cut-Off Current	I_{CES}			10	μA	$V_{CES}=120V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			1.0 1.5	V	$I_C=0.25A, I_B=0.25mA^*$ $I_C=1A, I_B=1mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.8	V	$I_C=1A, I_B=1mA^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			1.7	V	$I_C=1A, V_{CE}=5V^*$
Static Forward Current Transfer Ratio	h_{FE}	2000 5000 2000 500		100K		$I_C=50mA, V_{CE}=5V^*$ $I_C=500mA, V_{CE}=5V^*$ $I_C=1A, V_{CE}=5V^*$ $I_C=2A, V_{CE}=5V^*$
Transition Frequency	f_T	150			MHz	$I_C=100mA, V_{CE}=10V$ $f=20MHz$

* Measured under pulse conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$