

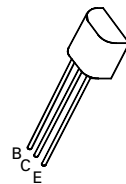
PNP SILICON PLANAR SWITCHING TRANSISTOR

FXT2907A

ISSUE 2 – SEPTEMBER 94

FEATURES

- * 60 Volt V_{CE0}
- * Fast switching



**E-Line
TO92 Compatible**

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-600	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	500	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +175	$^\circ\text{C}$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60			V	$I_C = -10\mu\text{A}$, $I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60			V	$I_C = -10\text{mA}$, $I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -10\mu\text{A}$, $I_C = 0$
Collector-Emitter Cut-Off Current	I_{CEX}			-50	nA	$V_{CE} = -30\text{V}$, $V_{BE} = -0.5\text{V}$
Collector Cut-Off Current	I_{CBO}			-10 -10	nA μA	$V_{CB} = -50\text{V}$, $I_E = 0$ $V_{CB} = -50\text{V}$, $I_E = 0$, $T_{amb} = 150^\circ\text{C}$
Base Cut-Off Current	I_B			-50	nA	$V_{CE} = -30\text{V}$, $V_{BE} = -0.5\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.4 -1.6	V V	$I_C = -150\text{mA}$, $I_B = -15\text{mA}^*$ $I_C = -500\text{mA}$, $I_B = -50\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.3 -2.6	V V	$I_C = -150\text{mA}$, $I_B = -15\text{mA}^*$ $I_C = -500\text{mA}$, $I_B = -50\text{mA}^*$
Static Forward Current Transfer Ratio	h_{FE}	75 100 100 100 50		300		$I_C = -0.1\text{mA}$, $V_{CE} = -10\text{V}$ $I_C = -1\text{mA}$, $V_{CE} = -10\text{V}$ $I_C = -10\text{mA}$, $V_{CE} = -10\text{V}$ $I_C = -150\text{mA}$, $V_{CE} = -10\text{V}^*$ $I_C = -500\text{mA}$, $V_{CE} = -10\text{V}^*$
Transition Frequency	f_T	200			MHz	$I_C = -50\text{mA}$, $V_{CE} = -20\text{V}$ $f = 100\text{MHz}$

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

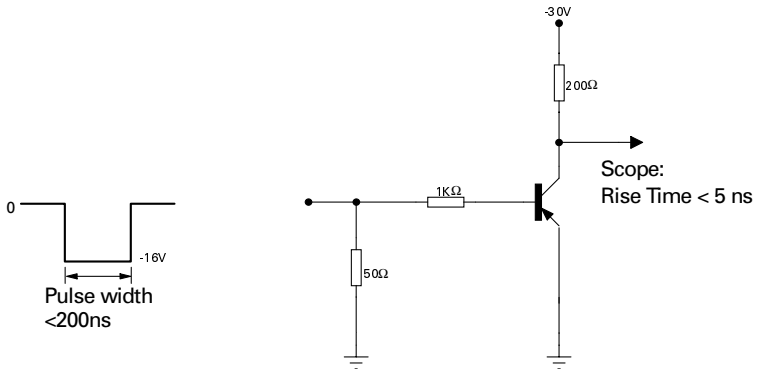
DISCONTINUED

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Output Capacitance	C_{obo}			8	pF	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 100\text{KHz}$
Input Capacitance	C_{ibo}			30	pF	$V_{BE} = 2\text{V}$, $I_C = 0$, $f = 100\text{KHz}$
Turn On Time	t_{on}			50	ns	$V_{CE} = -30\text{V}$ $I_C = -150\text{mA}$, $I_{B1} = 15\text{mA}$ (See Turn On Circuit)
Turn Off Time	t_{off}			110	ns	$V_{CC} = -6\text{V}$, $I_C = -150\text{mA}$ $I_{B1} = I_{B2} = -15\text{mA}$ (See Turn Off Circuit)

TURN ON TIME – TEST CIRCUIT



TURN OFF TIME – TEST CIRCUIT

