

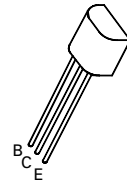
# PNP SILICON PLANAR SWITCHING TRANSISTOR

## FXT2907A

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### FEATURES

- \* 60 Volt  $V_{CEO}$
- \* 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 $\mu\text{A}$	$V_{CB} = -50\text{V}$ , $I_E = 0$ $V_{CB} = -50\text{V}$ , $I_E = 0$ , $T_{amb} = 150^\circ\text{C}$
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	$I_C = -50\text{mA}$ , $V_{CE} = -20\text{V}$ $f = 100\text{MHz}$

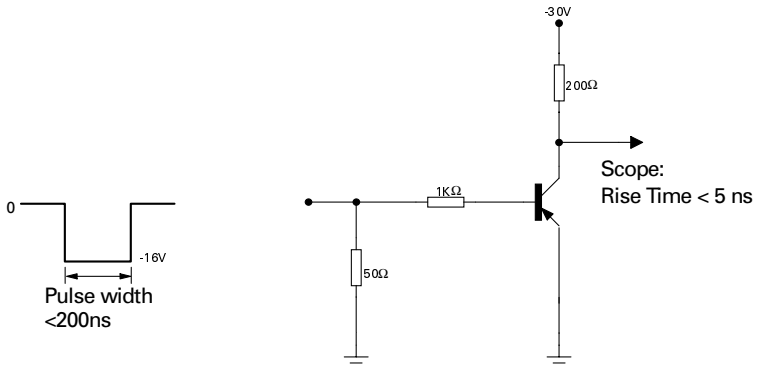
\*Measured under pulsed conditions. Pulse width=300ms. Duty cycle  $\leq 2\%$

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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

