

SOT223 PNP SILICON PLANAR SWITCHING TRANSISTOR

FZT2907
FZT2907A

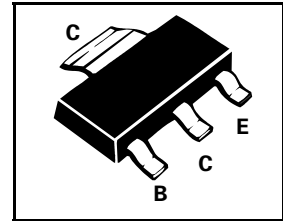
ISSUE 4 – JUNE 1996



FEATURES

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

PARTMARKING DETAIL – FZT2907 – FZT2907
FZT2907A – FZT2907A



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	FMMT2907	FMMT2907A	UNIT
Collector-Base Voltage	V_{CBO}	-60		V
Collector-Emitter Voltage	V_{CEO}	-40	-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}	1.5		mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150		$^\circ\text{C}$

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

PARAMETER	SYMBOL	FZT2907		FZT2907A		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40		-60		V	$I_C = -10\mu\text{A}, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60		-60		V	$I_C = -10\text{mA}, I_B = 0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		-5		V	$I_E = -10\mu\text{A}, I_C = 0$
Collector-Emitter Cut-Off Current	I_{CEX}		-50		-50	nA	$V_{CE} = -30\text{V}, V_{BE} = -0.5\text{V}$
Collector Cut-Off Current	I_{CBO}		-20 -20		-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		-50	nA	$V_{CE} = -30\text{V}, V_{BE} = -0.5\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.4 -1.6		-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		-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}	35 50 75 100 30	300	75 100 100 300 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		200		MHz	$I_C = -50\text{mA}, V_{CE} = -20\text{V}$ $f = 100\text{MHz}$

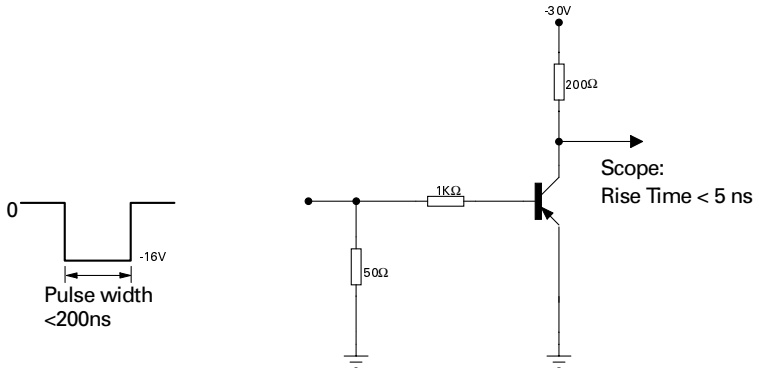
*Measured under pulsed conditions. Pulse width=300ms. Duty cycle $\leq 2\%$

FZT2907 FZT2907A

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

PARAMETER	SYMBOL	FMMT2907		FMMT2907A		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Output Capacitance	C_{obo}		8		8	pF	$V_{CE} = -10\text{V}, I_E = 0, f = 100\text{KHz}$
Input Capacitance	C_{ibo}		30		30	pF	$V_{BE} = -2\text{V}, I_C = 0, f = 100\text{KHz}$
Turn On Time	t_{on}		50		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		110	ns	$V_{CE} = -6\text{V}, I_C = -150\text{mA}, I_{B1} = I_{B2} = -15\text{mA}$ (See Turn Off Circuit)

TURN ON TIME – TEST CIRCUIT



TURN OFF TIME – TEST CIRCUIT

