SOT23 PNP SILICON PLANAR SWITCHING TRANSISTOR

FMMT2907 FMMT2907A

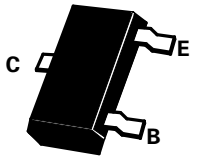
ISSUE 3 – FEBRUARY 1996 ✪

FEATURES

* Fast switching

COMPLIMENTARY TYPES - FMMT2907 – FMMT2222
- FMMT2907A – FMMT2222A

PARTMARKING DETAIL - FMMT2907 – 2BZ
FMMT2907A – 2F
FMMT2907R – 4P
FMMT2907AR – 5P



SOT23

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°C	P_{tot}	330		mW
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +150		°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	FMMT2907		FMMT2907A		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40		-60		V	I_C=-10μA, I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60		-60		V	I_C=-10mA, I_B=0*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		-5		V	I_E=-10μA, I_C=0
Collector-Emitter Cut-Off Current	I_{CEX}		-50		-50	nA	V_{CE}=-30V, V_{BE}=-0.5V
Collector Cut-Off Current	I_{CBO}		-20 -20		-10 -10	nA μA	V_{CB}=-50V, I_E=0 V_{CB}=-50V, I_E=0, T_{amb}=150°C
Base Cut-Off Current	I_B		-50		-50	nA	V_{CE}=-30V, V_{BE}=-0.5V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.4 -1.6		-0.4 -1.6	V V	I_C=-150mA, I_B=-15mA* I_C=-500mA, I_B=-50mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1.3 -2.6		-1.3 -2.6	V V	I_C=-150mA, I_B=-15mA* I_C=-500mA, I_B=-50mA*
Static Forward Current Transfer Ratio	h_{FE}	35 50 75 100 30	 300	75 100 100 100 50	 300		I_C=-0.1mA, V_{CE}=-10V I_C=-1mA, V_{CE}=-10V I_C=-10mA, V_{CE}=-10V I_C=-150mA, V_{CE}=-10V* I_C=-500mA, V_{CE}=-10V*
Transition Frequency	f_T	200		200		MHz	I_C=-50mA, V_{CE}=-20V f=100MHz

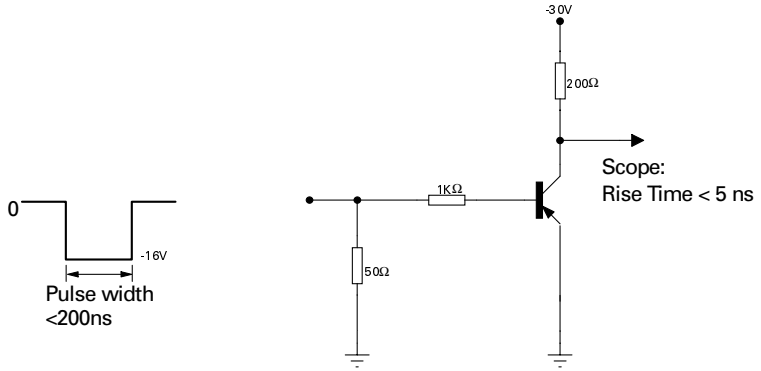
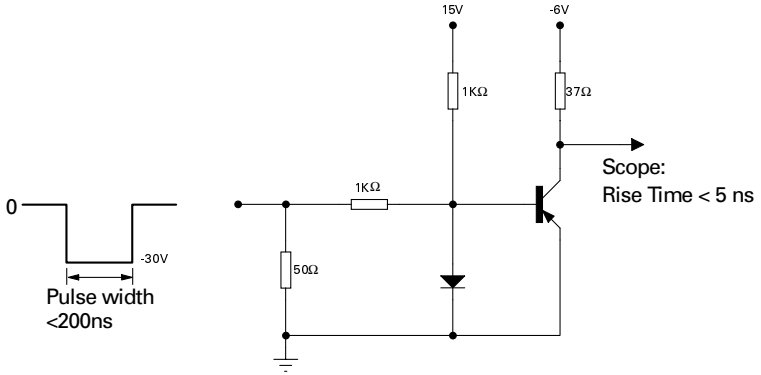
*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%

FMMT2907
FMMT2907A

SWITCHING CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	FMMT2907		FMMT2907A		UNIT	CONDITIONS.
		TYP.	MAX.	TYP.	MAX.		
Output Capacitance	C_{obo}		8		8	pF	V_{CB}=-10V, I_E=0, f=100KHz
Input Capacitance	C_{ibo}		30		30	pF	V_{BE}=-2V, I_C=0 f=100KHz
Turn On Time	t_{on}	26	50	26	50	ns	V_{CE}=-30V I_C=-150mA, I_{B1}=-15mA (See Turn On Circuit)
Turn Off Time	t_{off}	70	110	70	110	ns	V_{CE}=-6V, I_C=-150mA I_{B1}= I_{B2}=-15mA (See Turn Off Circuit)

TURN ON TIME – TEST CIRCUIT



TURN OFF TIME – TEST CIRCUIT