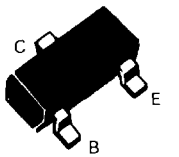
SOT23 PNP SILICON PLANAR SWITCHING TRANSISTORS

FMMT2907
FMMT2907A

PARTMARKING DETAILS:
FMMT2907 – 2B
FMMT2907A – 2F
FMMT2907R – 4P
FMMT2907AR – 5P



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	FMMT2907	FMMT2907A	UNIT
Collector-Base Voltage	V_{CBO}	-60	-60	V
Collector-Emitter Voltage	V_{CEO}	-40	-60	V
Emitter-Base Voltage	V_{EBO}	-5	-5	V
Continuous Collector Current	I_C	-600	-600	mA
Power Dissipation at $T_{amb}=25°C$	P_{TOT}	330	330	mW
Operating and Storage Temperature Range	tj:tstg	−55 to +150		°C

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

PARAMETER	SYMBOL	FMMT2907 MIN.	FMMT2907 MAX.	FMMT2907A MIN.	FMMT2907A MAX.	UNIT	CONDITIONS
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-40		-60		V	$I_C=-10mA$, $I_B=0$*
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60		-60		V	$I_C=-10\mu A$, $I_E=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		-5		V	$I_E=-10\mu A$, $I_C=0$
Collector-Emitter Cut-Off Current	I_{CEX}		-50		-50	nA	$V_{CE}=-30V$, $V_{BE}=-0.5V$
Collector-Base 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	$V_C=-30V$, $V_B=-0.5V$
Static Forward Current Transfer Ratio	H_{FE}	35 50 75 100 30	 300 	75 100 100 100 50	 300 		$I_C=-0.1mA$, $V_{CE}=-10V$ $I_C=-1mA$, $V_{CE}=-10V$ $I_C=-10mA$, $V_{CE}=-10V$ $I_C=150mA$, $V_{CE}=-10V$* $I_C=-500mA$, $V_{CE}=-10V$*
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	$V_{BE(sat)}$		-1.3 -2.6		-1.3 -2.6	V V	$I_C=-150mA$, $I_B=-15mA$* $I_C=-500mA$, $I_B=-50mA$*
Transition Frequency	f_T	200		200		MHz	$I_C=-50mA$, $V_{CE}=-20V$ $f=100MHz$
Output Capacitance	C_{obo}		8		8	pF	$V_{CB}=-10V$, $I_E=0$ $f=100KHz$
Input Capacitance	C_{ibo}		30		30	pF	$V_{BE}=-2V$, $I_C=0$ $f=100KHz$

* **Measured under pulsed conditions. Pulse width = 200μs.** Duty cycle = 1%.

SWITCHING CHARACTERISTICS (at 25°C ambient temperature)

PARAMETER	SYMBOL	TYP.	MAX.	UNIT	CONDITIONS
Turn-On Time	t_{on}	26	50	ns	V_{CC} = -30V, I_C = -150mA I_{B1} = -15mA (See fig. 1)
Turn-Off Time	t_{off}	70	110	ns	V_{CC} = -6V, I_C = -150mA I_{B1} = -I_{B2} = -15mA (See Fig. 2)

CIRCUITS FOR MEASURING SWITCHING TIMES

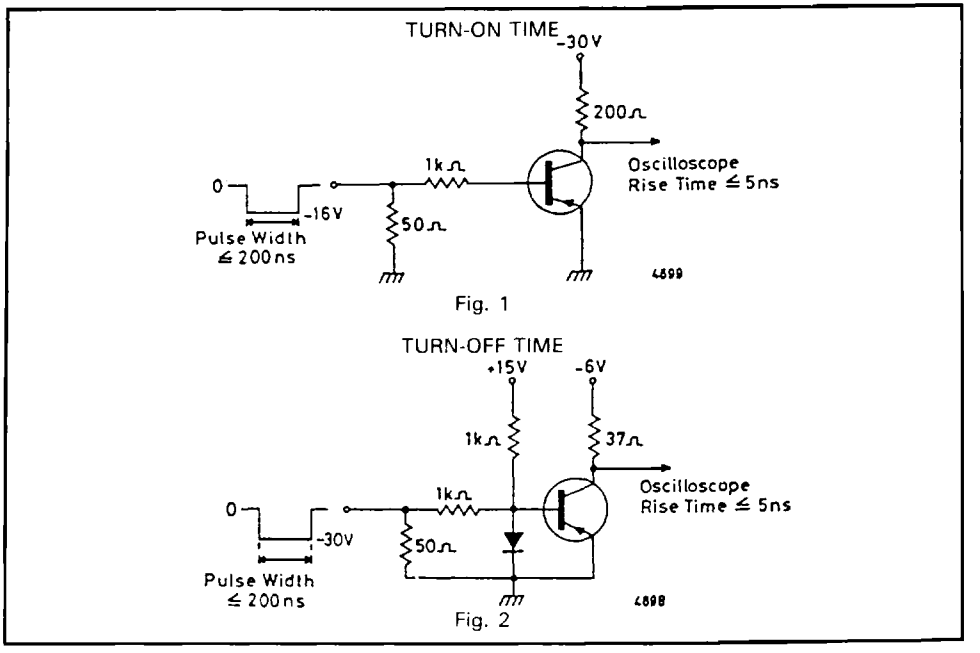


Fig. 1

Fig. 2