

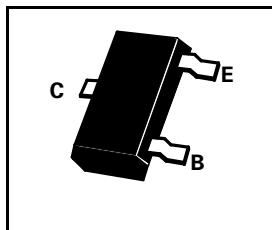
SOT23 PNP SILICON PLANAR SWITCHING TRANSISTOR

FMMT4125

ISSUE 2 – MARCH 1995



PARTMARKING DETAIL – ZD



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-30	V
Collector-Emitter Voltage	V_{CEO}	-30	V
Emitter-Base Voltage	V_{EBO}	-4	V
Continuous Collector Current	I_C	-200	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	P_{tot}	330	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-30		V	$I_C = -10\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-30		V	$I_C = -1mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-4		V	$I_E = -10\mu A$
Collector Cut-Off Current	I_{CBO}		-50	nA	$V_{CB} = -20V$
Emitter Cut-Off Current	I_{EBO}		-50	nA	$V_{EB} = -3V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.4	V	$I_C = -50mA, I_B = -5mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		0.95	V	$I_C = -50mA, I_B = -5mA^*$
Static Forward Current Transfer Ratio	h_{FE}	50 25	150		$I_C = -2mA, V_{CE} = -1V^*$ $I_C = -50mA, V_{CE} = -1V^*$
Transition Frequency	f_T	200		MHz	$I_C = -10mA, V_{CE} = -20V, f = 100MHz$
Output Capacitance	C_{obo}		4.5	pF	$V_{CB} = -5V, I_E = 0, f = 140KHz$
Input Capacitance	C_{ibo}		10	pF	$V_{BE} = -0.5V, I_E = 0, f = 140KHz$
Noise Figure	N		5	dB	$I_C = -200\mu A, V_{CE} = -5V, R_g = -2k\Omega$ $f = 30Hz$ to $15KHz$ at 3dB points
Small Signal Current Transfer	h_{fe}	50	200		$I_C = -2mA, V_{CE} = -1V, f = 1KHz$

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

PARAMETER	SYMBOL	TYP.	UNIT	CONDITIONS
Delay Time	t_d	25	ns	$V_{CC} = -3V, V_{BE(off)} = -0.5V$ $I_C = -10mA, I_{B1} = -1mA$
Rise Time	t_r	18	ns	
Storage Time	t_s	140	ns	$V_{CC} = -3V, I_C = -10mA$ $I_{B1} = I_{B2} = -1mA$
Fall Time	t_f	15	ns	

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