

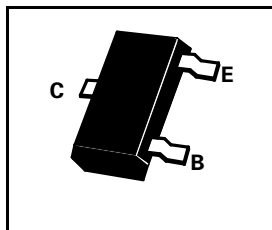
# SOT23 PNP SILICON PLANAR SWITCHING TRANSISTOR

## FMMT4126

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PARTMARKING DETAIL – ZE



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-25	V
Collector-Emitter Voltage	$V_{CEO}$	-25	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	$V_{(BR)CBO}$	-25		V	$I_C = -10\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-25		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	$h_{FE}$	120 60	360		$I_C = -2mA, V_{CE} = -1V^*$ $I_C = -50mA, V_{CE} = -1V^*$
Transition Frequency	$f_T$	250		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		4	dB	$I_C = -200\mu A, V_{CE} = -5V, R_g = -2k\Omega$ $f = 30Hz$ to $15KHz$ at 3dB points
Small Signal Current Transfer	$h_{fe}$	120	180		$I_C = -2mA, V_{CE} = -1V, f = 1KHz$

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

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

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