



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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SOT23 NPN SILICON PLANAR RF TRANSISTOR

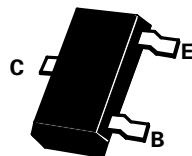
FMMTH10

ISSUE 2 – NOVEMBER 1995

FEATURES

- * High $f_T=650\text{MHz}$
- * Maximum capacitance 0.7pF
- * Low noise < 5dB at 500MHz

PARTMARKING DETAIL – 3EZ



SOT23

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Emitter Voltage	V_{CES}	30	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	3	V
Continuous Collector Current	I_C	25	mA
Peak Pulse Current	I_{CM}	50	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	330	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^\circ\text{C}$

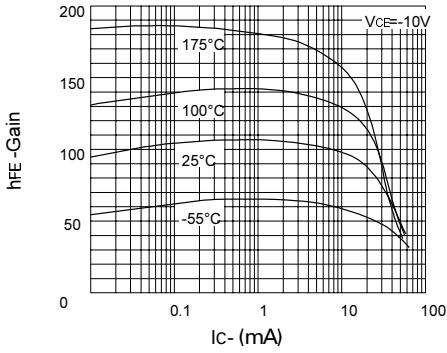
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$)

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	30		V	$I_C=100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	25		V	$I_C=1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	3		V	$I_E=10\mu\text{A}, I_C=0$
Collector Cut-Off Current	I_{CBO}		100	nA	$V_{CB}=25\text{V}, I_E=0$
Emitter Cut-Off Current	I_{EBO}		100	nA	$V_{EB}=2\text{V}, I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.5	V	$I_C=4\text{mA}, I_B=0.4\text{mA}$
Common Base Feedback Capacitance	C_{rb}	Typ. 0.45	0.65	pF	$V_{CB}=10\text{V}, I_E=0$ $f=1\text{MHz}$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		0.95	V	$I_C=4\text{mA}, V_{CE}=10\text{V}$
Static Forward Current Transfer Ratio	h_{FE}	60			$I_C=4\text{mA}, V_{CE}=10\text{V}^*$
Transition Frequency	f_T	650		MHz	$I_C=4\text{mA}, V_{CE}=10\text{V}, f=100\text{MHz}$
Collector Base Capacitance	C_{cb}		0.7	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$
Collector Base Time Constant	$\tau_b C_c$		9	ps	$I_C=4\text{mA}, V_{CB}=10\text{V}, f=31.8\text{MHz}$
Noise Figure	N_f	Typ. 3	5	dB	$I_C=2\text{mA}, V_{CE}=5\text{V}$ $f=500\text{MHz}$,

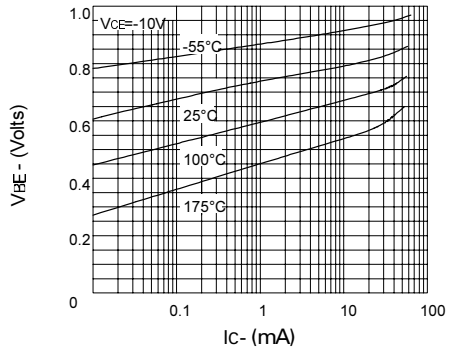
*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device

FMMTH10

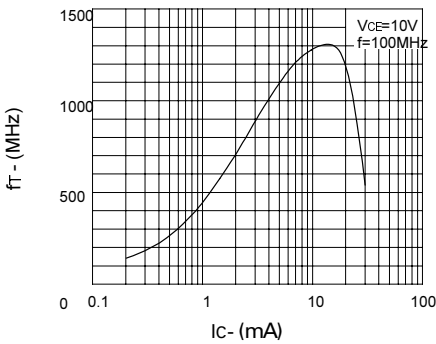
TYPICAL CHARACTERISTICS



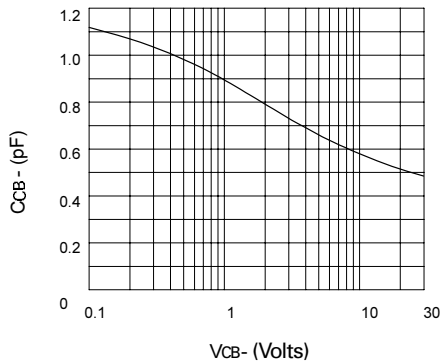
hFE v I_C



$V_{BE(on)}$ v I_C



f_T v I_C



C_{CB} v V_{CB}