

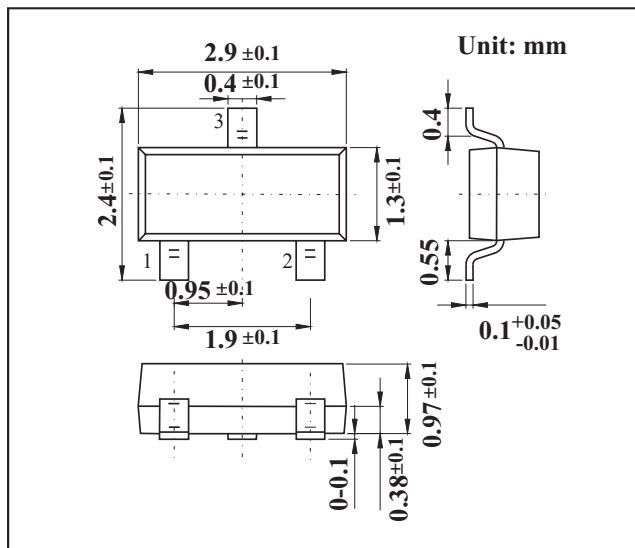
SOT-23 Plastic-Encapsulate Transistors

Features

- Low equivalent on-resistance.
- Medium Power Transistor

MECHANICAL DATA

- Case style: SOT-23 molded plastic
- Mounting position: any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	50	V
Collector-emitter voltage	V_{CEO}	30	V
Emitter-base voltage	V_{EBO}	5	V
Peak collector current	I_{CM}	2	A
Collector current	I_C	1	A
Base current	I_B	200	mA
Power dissipation	P_{tot}	500	mW
Operating and storage temperature range	T_j, T_{stg}	-55 to +125	°C

PACKAGE INFORMATION

Device	Package	Shipping
FMMT4124	SOT-23	3000/Tape&Reel

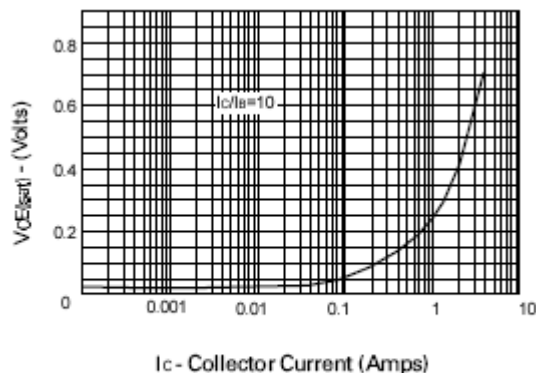
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=1mA, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cutoff current	I_{CBO}	$V_{CB}=40V, I_E=0$			0.1	μA
		$V_{CB}=40V, T_{amb}=100^\circ C$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.1	μA
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C=1A, I_B=100mA$			0.5	V
		$I_C=2A, I_B=200mA$			1.0	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C=1A, I_B=100mA$			1.25	V
Base-emitter voltage *	$V_{BE(ON)}$	$I_C=1A, V_{CE}=2V$			1.0	V
Static Forward Current Transfer Ratio	h_{FE}	$I_C=50mA, V_{CE}=2V^*$	70			
		$I_C=500mA, V_{CE}=2V^*$	100		300	
		$I_C=1A, V_{CE}=2V^*$	80			
		$I_C=2A, V_{CE}=2V^*$	40			
Current-gain-bandwidth product	f_T	$I_C=50mA, V_{CE}=10V, f=100MHz$	150			MHz
Output capacitance	C_{obo}	$V_{CB}=10V, f=1MHz$			15	pF

* Pulse width=300 μs . Duty cycle $\leq 2\%$

Marking

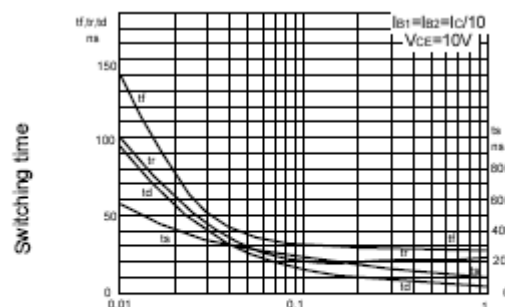
Marking	449
---------	-----

RATINGS AND CHARACTERISTIC CURVES



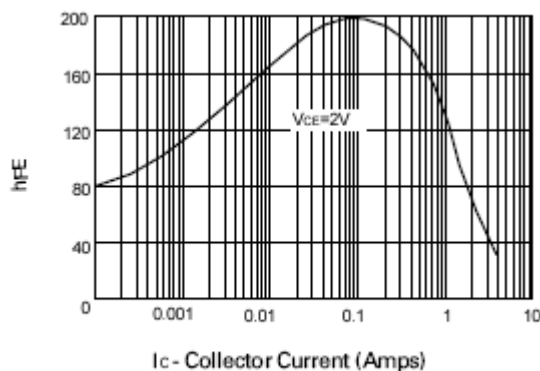
I_C - Collector Current (Amps)

$V_{CE(sat)}$ v I_C



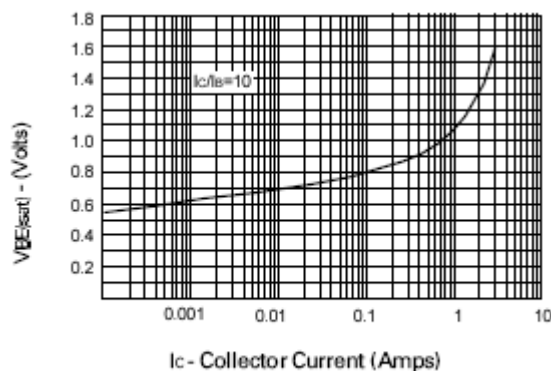
I_C - Collector Current (Amps)

Switching Speeds



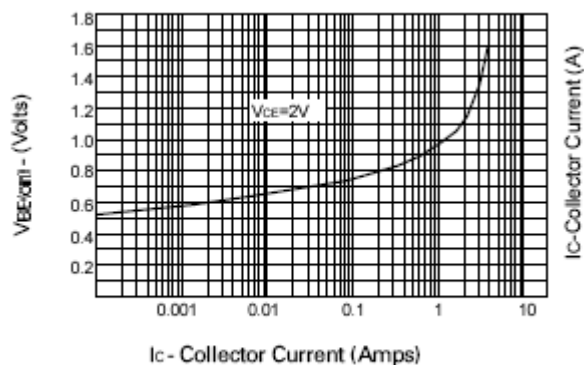
I_C - Collector Current (Amps)

h_{FE} v I_C



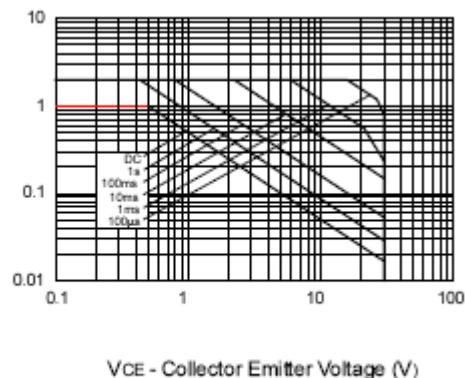
I_C - Collector Current (Amps)

$V_{BE(sat)}$ v I_C



I_C - Collector Current (Amps)

$V_{BE(on)}$ v I_C



V_{CE} - Collector Emitter Voltage (V)

Safe Operating Area