

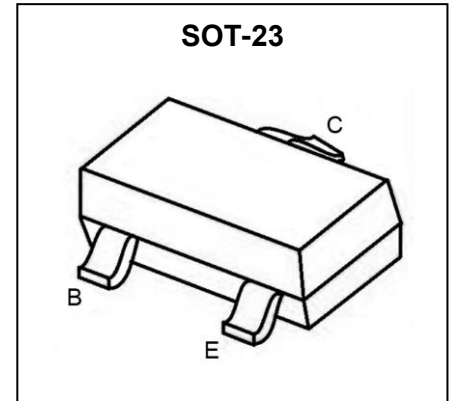


MMBTA14 Transistor(NPN)

Feature

- For Switching and Amplifier Applications

Marking: K3D



MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

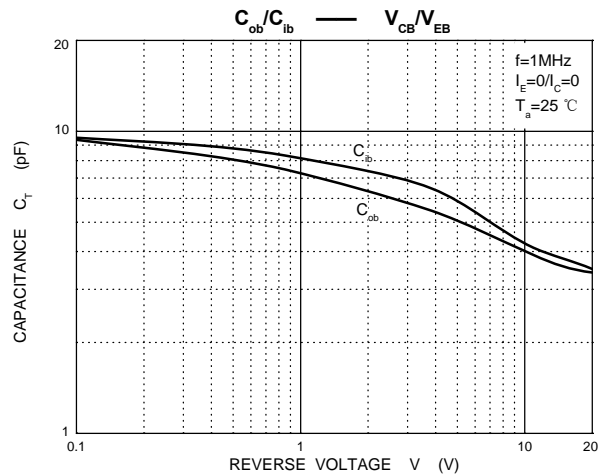
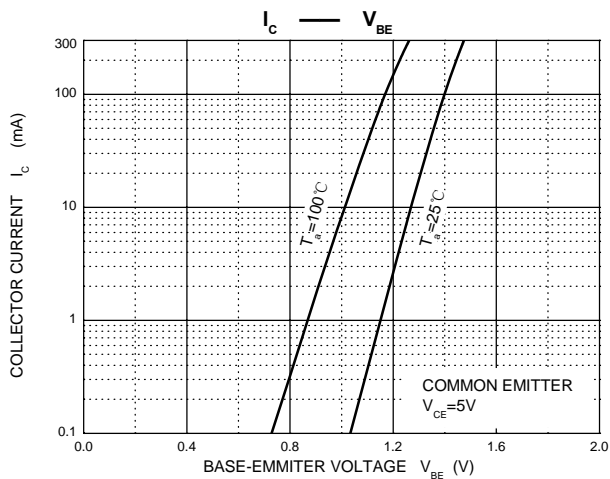
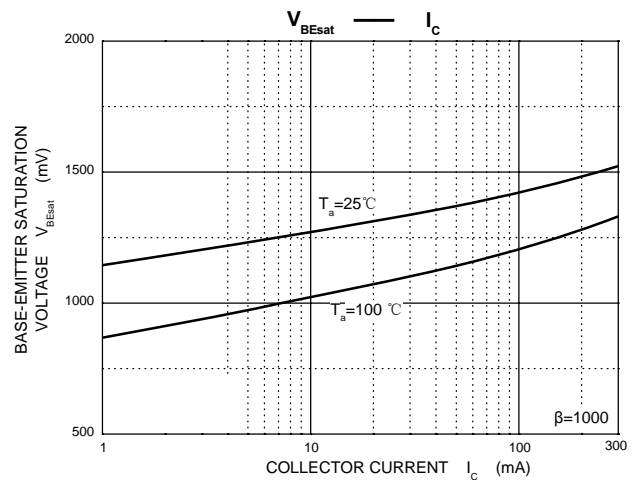
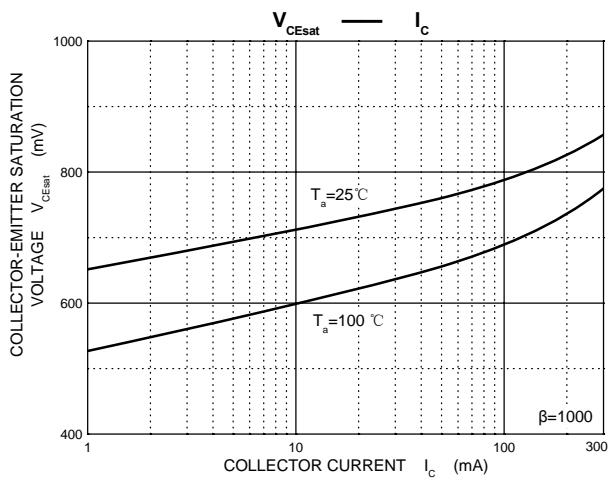
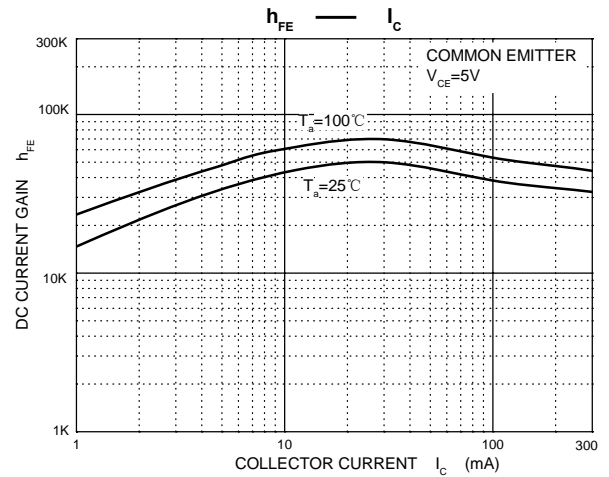
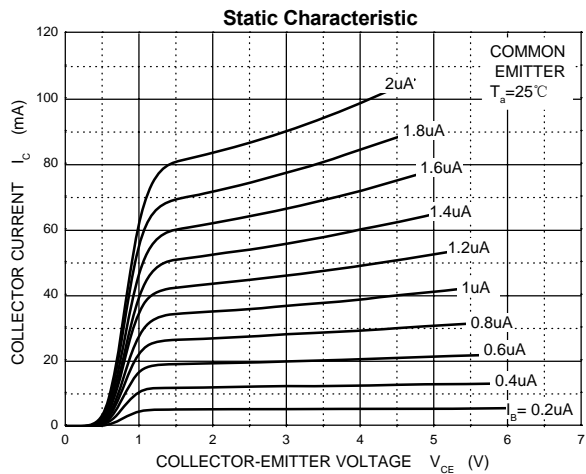
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	30	V
Collector-Emitter Voltage	V _{CEO}	30	V
Emitter-Base Voltage	V _{EBO}	10	V
Collector Current -Continuous	I _c	0.3	A
Power Dissipation	P _d	0.3	W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~ +150	°C

ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

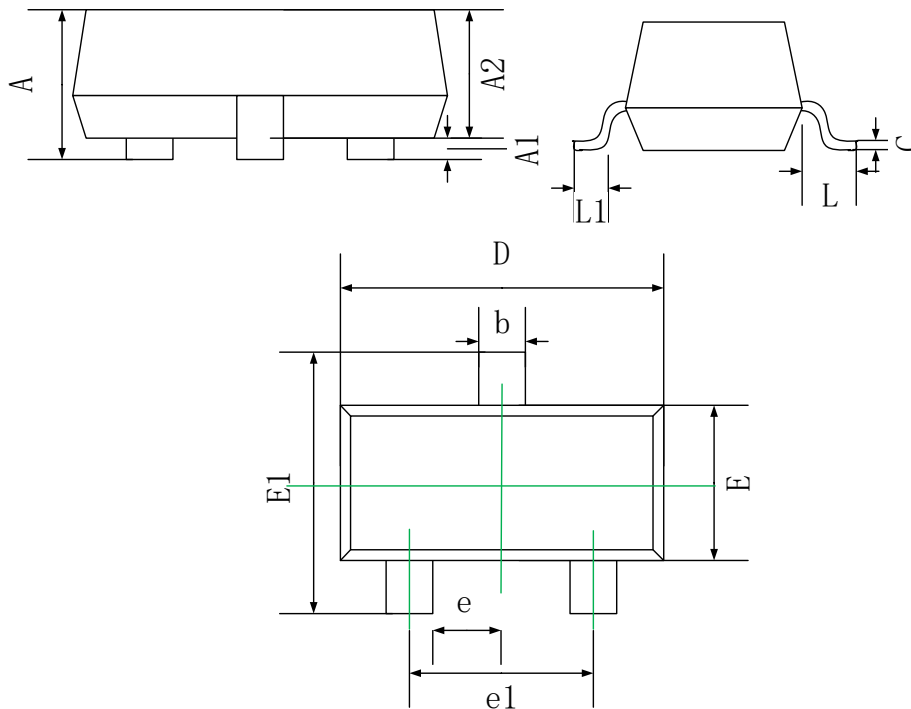
Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	30		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =100μA, I _B =0	30		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	10		V
Collector cut-off current	*I _{CBO}	V _{CB} =30V, I _E =0		0.1	nA
Emitter cut-off current	*I _{EBO} *	V _{EB} =10V, I _C =0		0.1	nA
DC current gain	*h _{FE}	V _{CE} =5V, I _C =10mA	10000		
		V _{CE} =5V, I _C =100mA	20000		
Collector-emitter saturation voltage	*V _{CE(sat)}	I _C =100mA, I _B = 0.1mA		1.5	V
Base-emitter saturation voltage	*V _{BE(sat)}	I _C =100mA, I _B = 0.1mA		2	V
Base-emitter voltage	*V _{BE}	V _{CE} =5V, I _C =100mA		2	V
Transition frequency	f _T	V _{CE} = 5V, I _C =10mA, f =100MHz	125		MHZ
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		12	pF

* Pulse Test : pulse width ≤300us, duty cycle ≤2%.

Typical Characteristics

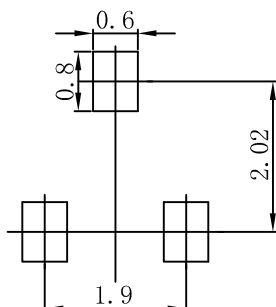


SOT-23 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.