

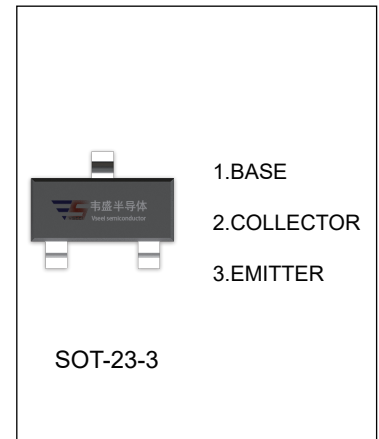
MMBTA28 TRANSISTOR (NPN)

FEATURES

- High Current Gain

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	80	V
V _{CEO}	Collector-Emitter Voltage	80	V
V _{EBO}	Emitter-Base Voltage	12	V
I _C	Collector Current	500	mA
P _C	Collector Power Dissipation	200	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

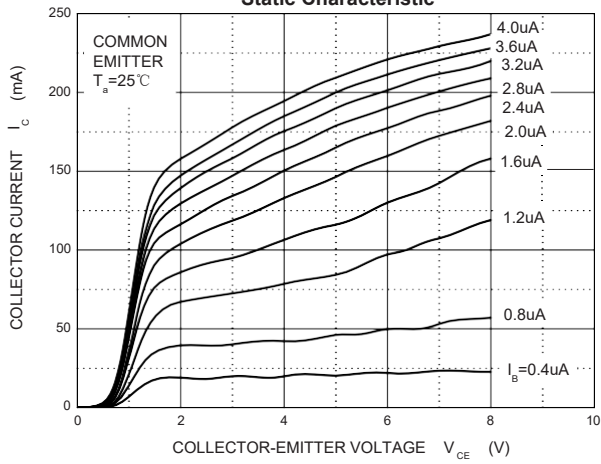


ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

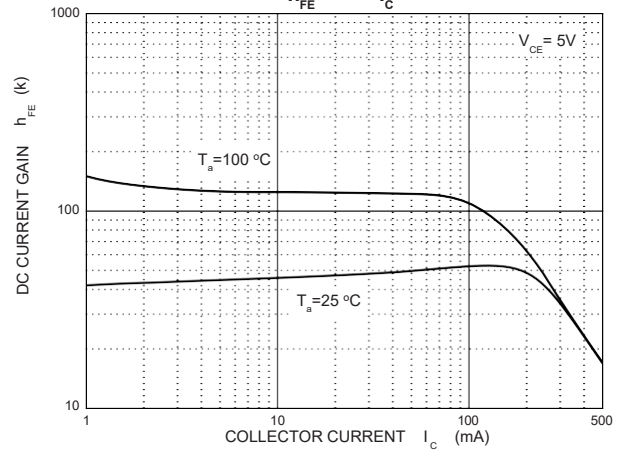
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	80			V
Collector-emitter sustain voltage	V _{CEO(sus)}	I _C =100μA, V _{BE} =0	80			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	12			V
Collector cut-off current	I _{CBO}	V _{CB} =60V, I _E =0			0.1	μA
Collector cut-off current	I _{CES}	V _{CE} =60V, V _{BE} =0			0.5	μA
Emitter cut-off current	I _{EBO}	V _{EB} =10V, I _C =0			0.1	μA
DC current gain	h _{FE(1)} *	V _{CE} =5V, I _C =10mA	10			K
	h _{FE(2)} *	V _{CE} =5V, I _C =100mA	10			K
Collector-emitter saturation voltage	V _{CE(sat)1} *	I _C =10mA, I _B =0.01mA			1.2	V
	V _{CE(sat)2} *	I _C =100mA, I _B =0.1mA			1.5	V
Base-emitter voltage	V _{BE} *	V _{CE} =5V, I _C =100mA			2	V
Collector output capacitance	C _{ob}	V _{CB} =1V, I _E =0, f=1MHz			8	pF
Transition frequency	f _T	V _{CE} =5V, I _C =10mA, f=100MHz	125			MHz

*Pulse test: pulse width ≤300μs, duty cycle ≤ 2.0%.

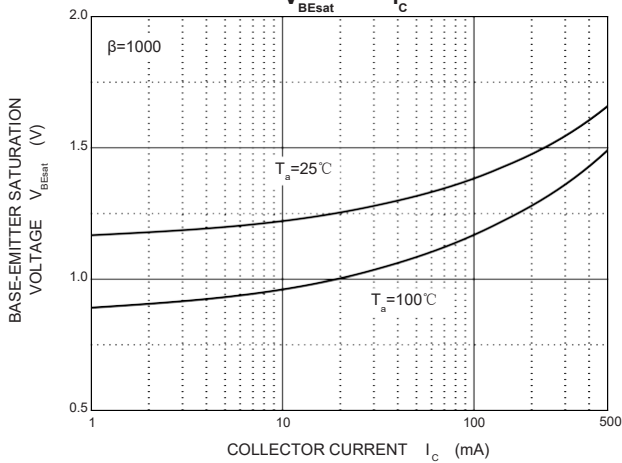
Static Characteristic



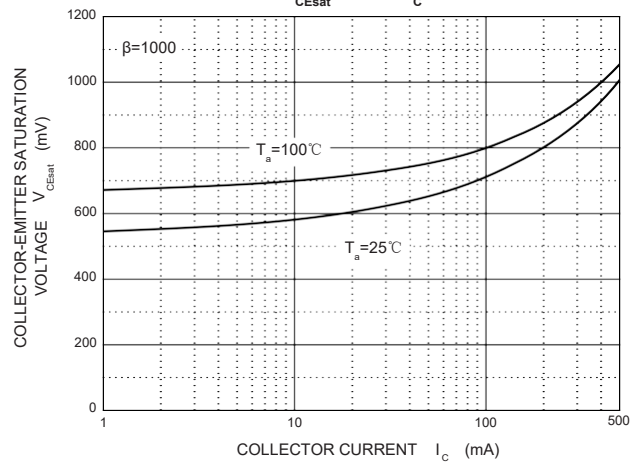
$h_{FE} - I_C$



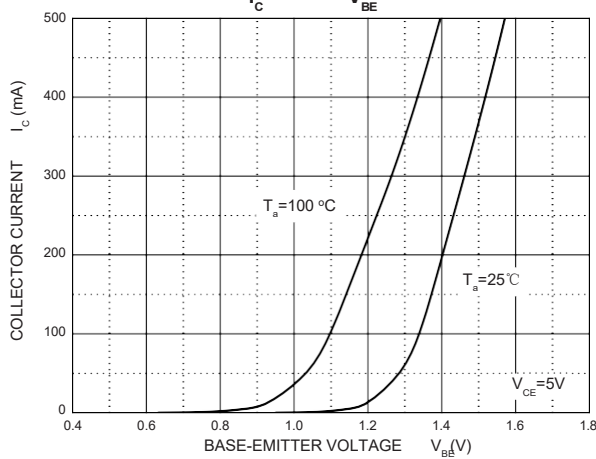
$V_{BEsat} - I_C$



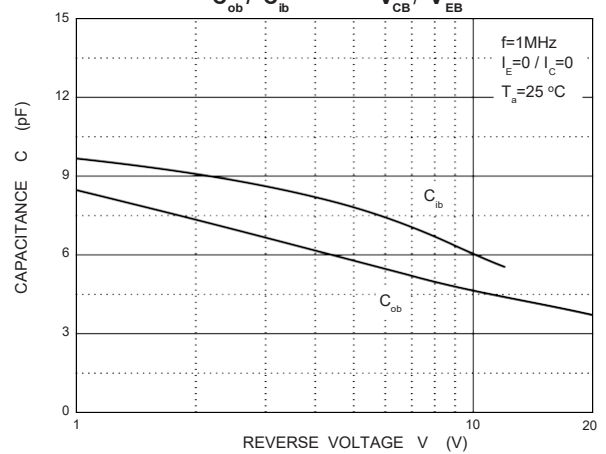
$V_{CEsat} - I_C$



$I_C - V_{BE}$



$C_{ob} / C_{ib} - V_{CB} / V_{EB}$



$P_c - T_a$

