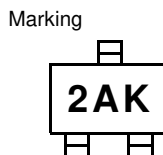
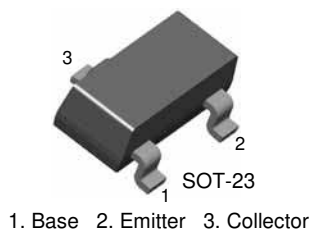


MMBT3906K

PNP Epitaxial Silicon Transistor

General Purpose Transistor



Absolute Maximum Ratings T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	-40	V
V _{CEO}	Collector-Emitter Voltage	-40	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current	-200	mA
P _C	Collector Power Dissipation	350	mW
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 ~ 150	°C

Electrical Characteristics T_a = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
BV _{CBO}	Collector-Base Breakdown Voltage	I _C = -10μA, I _E = 0	-40		V
BV _{CEO}	Collector-Emitter Breakdown Voltage *	I _C = -1.0mA, I _B = 0	-40		V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E = 10μA, I _C = 0	-5		V
I _{CEX}	Collector Cut-off Current	V _{CE} = -30V, V _{EB} = -3V		-50	nA
h _{FE}	DC Current Gain *	V _{CE} = -1V, I _C = -0.1mA V _{CE} = -1V, I _C = -1mA V _{CE} = -1V, I _C = -10mA V _{CE} = -1V, I _C = -50mA V _{CE} = -1V, I _C = -100mA	60 80 100 60 30	300	
V _{CE} (sat)	Collector-Emitter Saturation Voltage *	I _C = -10mA, I _B = -1mA I _C = -50mA, I _B = -5.0mA		-0.25 -0.4	V V
V _{BE} (sat)	Base-Emitter Saturation Voltage *	I _C = -10mA, I _B = -1.0mA I _C = -50mA, I _B = -5.0mA	-0.65	-0.85 -0.95	V V
f _T	Current Gain Bandwidth Product	I _C = -10mA, V _{CE} = -20V, f = 100MHz	250		MHz
C _{ob}	Output Capacitance	V _{CB} = -5V, I _E = 0, f = 1.0MHz		4.5	pF
NF	Noise Figure	I _C = -100μA, V _{CE} = -5V, R _S = 1KΩ f = 10Hz to 15.7KHz		4	dB
t _{ON}	Turn On Time	V _{CC} = -3V, V _{BE} = -0.5V I _C = -10mA, I _{B1} = -1mA		70	ns
t _{OFF}	Turn Off Time	V _{CC} = -3V, I _C = -10mA, I _{B1} = I _{B2} = -1mA		300	ns

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%

Typical Performance Characteristics

Figure 1. DC current Gain

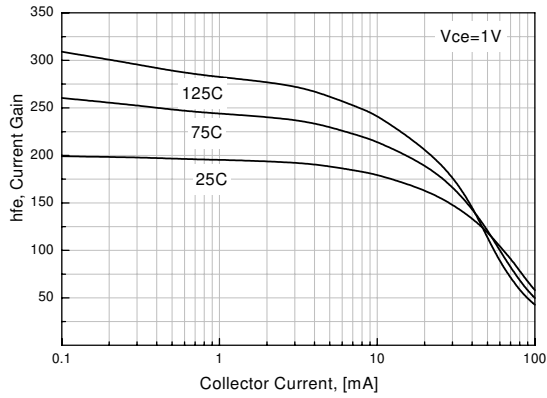


Figure 2. Collector-Emitter Saturation Voltage

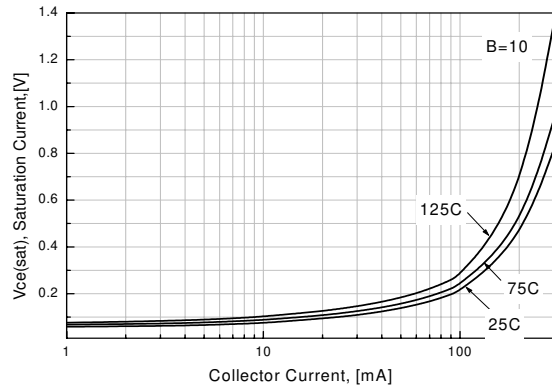


Figure 3. Base-Emitter Saturation Voltage

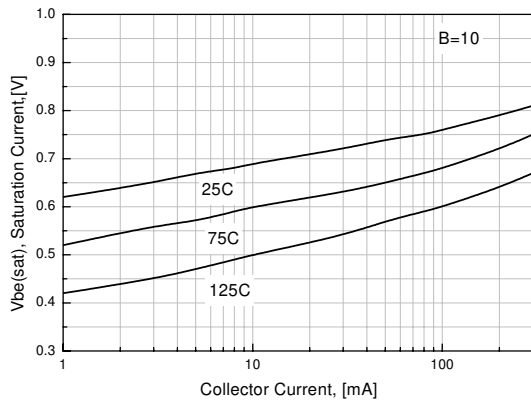


Figure 4. Collector - Base Leakage Current

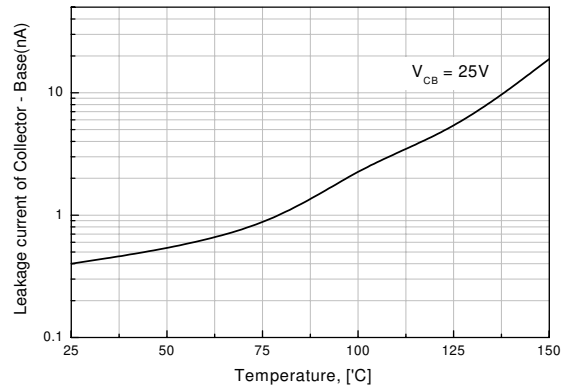


Figure 5. Output Capacitance

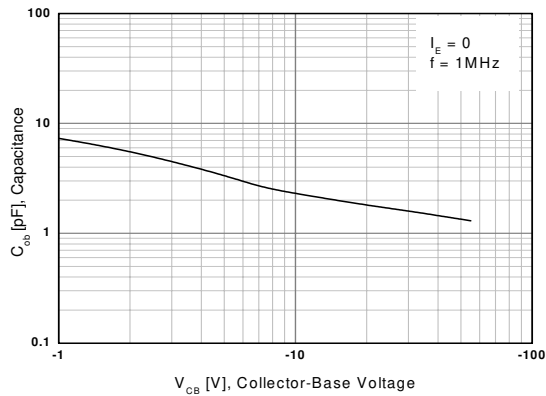
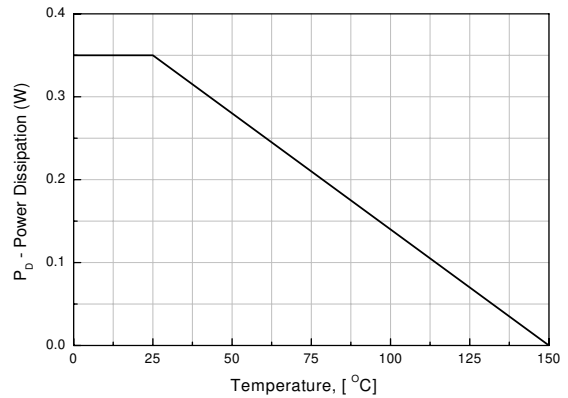
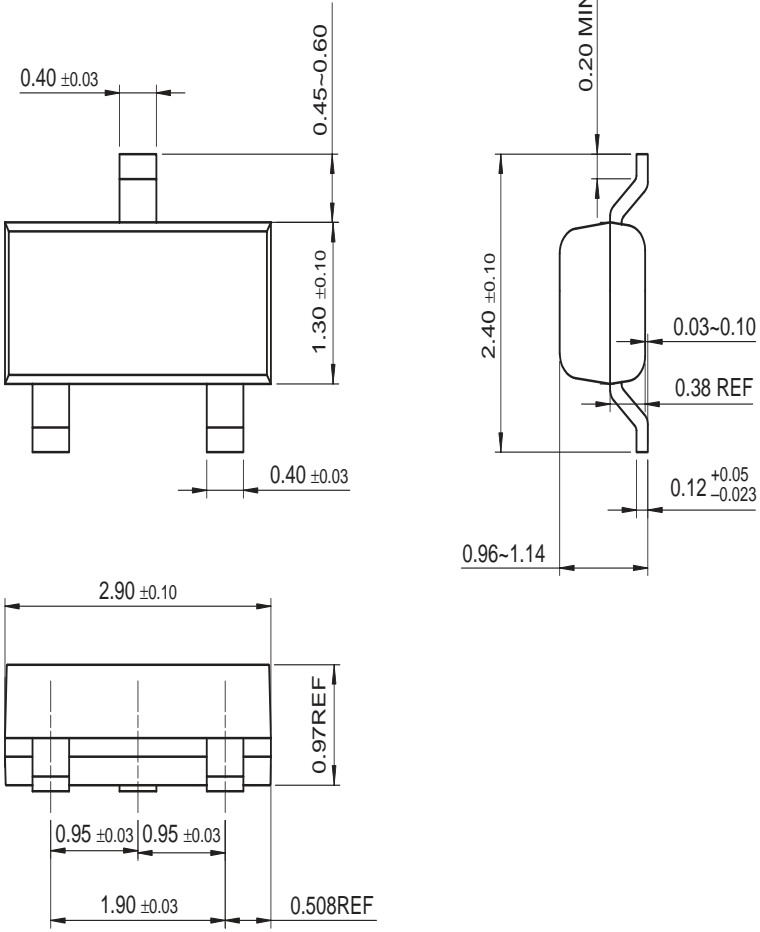


Figure 6. Power Dissipation vs Ambient Temperature



Mechanical Dimensions

SOT-23



Dimensions in Millimeters

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