

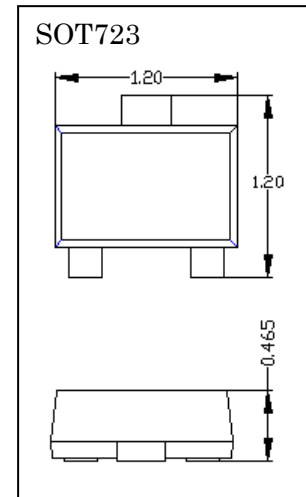
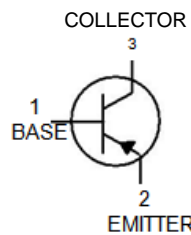
DATA SHEET

MMBT3906M

- ◇ Capable of 100 mWatts of Power Dissipation and 200mA Ic
- ◇ Operating and Storage Junction Temperatures: -55°C to 150°C
- ◇ Small Outline Surface Mount Package
- ◇ RoHS compliant / Green EMC

Device Marking Code	
MMBT3906M	3N

Circuit Diagram



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

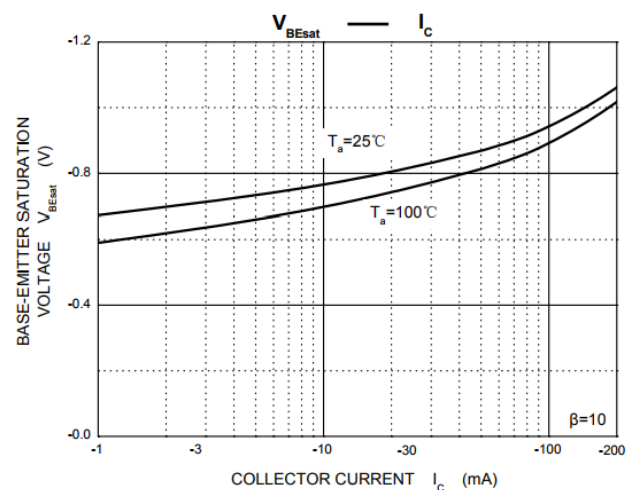
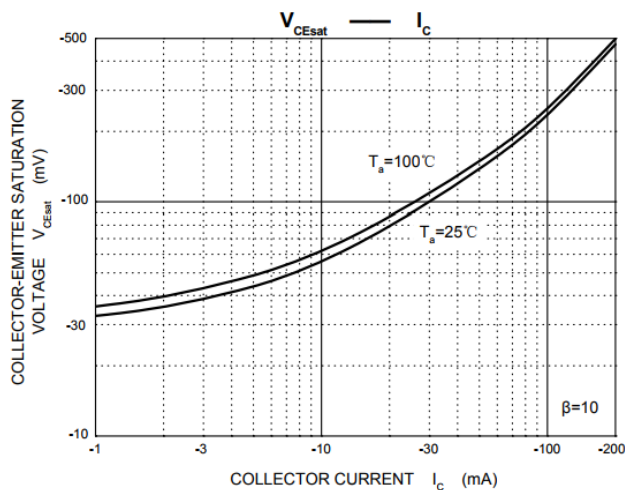
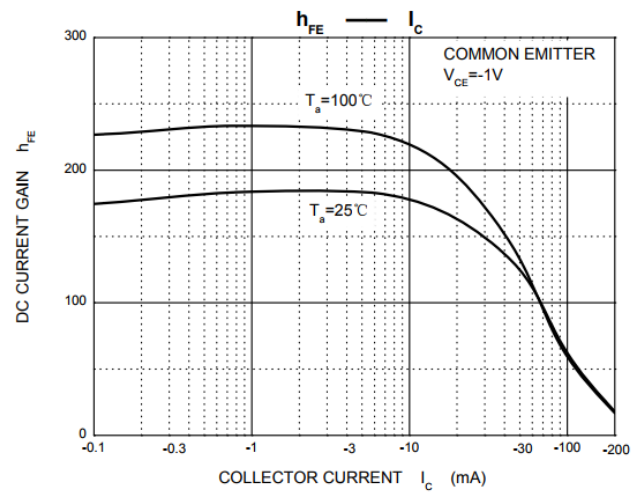
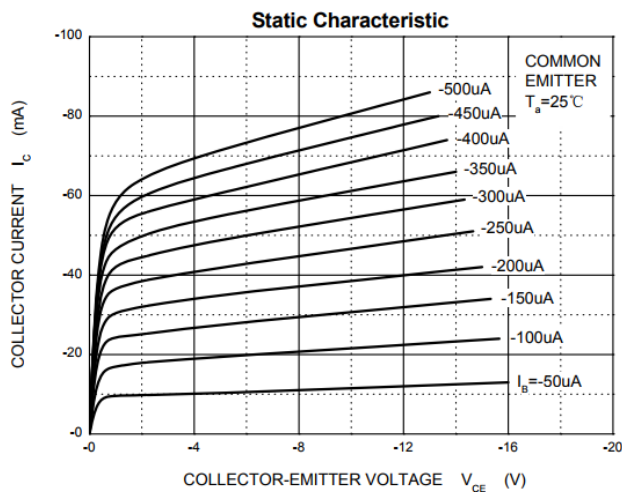
Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-40	V
V _{CEO}	Collector-Emitter Voltage	-40	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _c	Collector Current -Continuous	-0.2	A
P _c	Collector Power Dissipation	100	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	1250	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

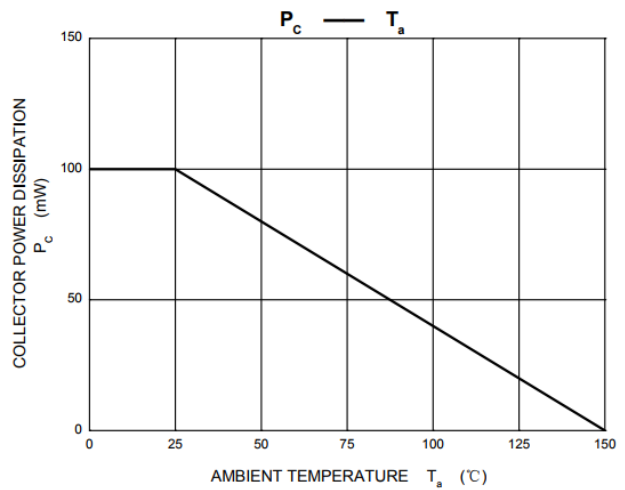
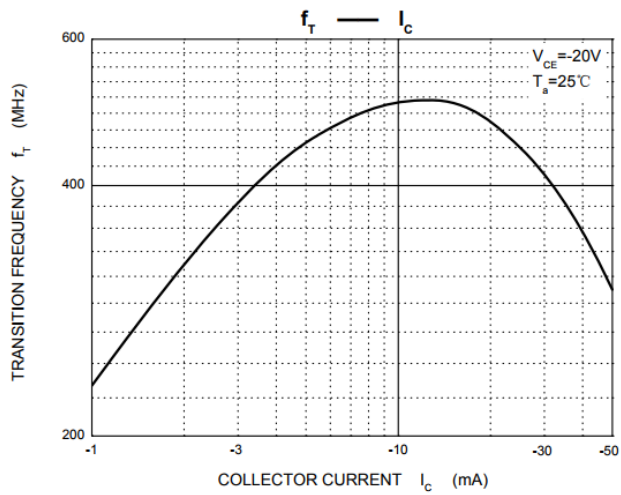
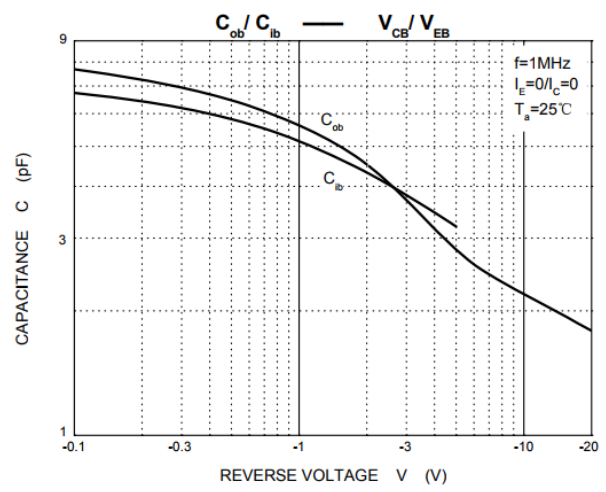
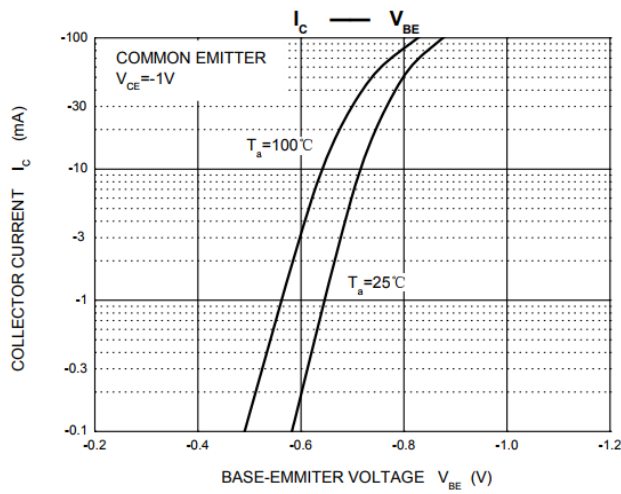
ELECTRICAL CHARACTERISTICS @ 25° C Unless Otherwise Specified

Symbol	Parameter	Test Conditions	Min	Max	Units
V _{CEO}	Collector-Emitter Breakdown Voltage	I _c = -1.0mA, I _B = 0	-40		V
V _{CB0}	Collector-Base Breakdown Voltage	I _c = -10μA, I _E = 0	-40		V
V _{EBO}	Emitter-Base Breakdown Voltage	I _E = -10μA, I _c = 0	-5		V
I _{CB0}	Collector Cut-off Current	V _{CB} = -40V, I _E = 0		-100	nA

I_{CEX}	Collector Cut-off Current	$V_{CE}=-30V, V_{EB(OFF)}=-3.0V$		-50	nA
I_{EBO}	Emitter Cut-off Current	$V_{EB}=-5V, I_C=0$		-100	nA
$h_{FE(1)}$	DC Current Gain	$I_C=-10mA, V_{CE}=-1V$	100	300	
$h_{FE(2)}$	DC Current Gain	$I_C=-50mA, V_{CE}=-1V$	60		
$h_{FE(3)}$	DC Current Gain	$I_C=-100mA, V_{CE}=-2V$	30		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=-50mA, I_B=-5mA$		-0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=-50mA, I_B=-5mA$		-0.95	V
f_T	Current Gain-Band width Product	$I_C=-10mA, V_{CE}=-20V, f=100MHz$	300		MHz
t_d	Delay Time	$V_{CC}=-3.0V, V_{BE(off)}=-0.5V$		35	ns
t_r	Rise Time	$I_C=-10mA, I_{B1}=I_{B2}=-1.0mA$		35	ns
t_s	Storage Time	$V_{CC}=-3.0V, I_C=-10mA$		225	ns
t_f	Fall Time	$I_{B1}=I_{B2}=-1.0mA$		75	ns

TYPICAL CHARACTERISTICS





ORDERING INFORMATION

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
MMBT3906M	SOT723	Tape & Reel 8000pcs /7" Reel	8mm	4mm	Conductive	

PACKAGE DIMENSIONS

