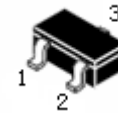
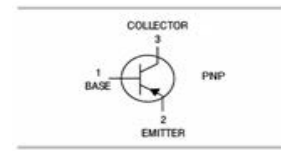




FEATURES

- Epitaxial planar die construction
- Complementary NPN type available (MMBT3904T)
- Low Current (Max: -200mA)
- Low Voltage(Max: -40V)



APPLICATIONS

- Ideal for medium power amplification and switching

SOT-523

ORDERING INFORMATION

Type No.	Marking	Package Code
MMBT3906T	3N	SOT-523

MAXIMUM RATING @ Ta=25°C unless otherwise specified

SYMBOL	PARAMETER	Value	UNIT
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 (DC)	-200	mA
P_d	Power dissipation	150	mW
$R_{\theta JA}$	Thermal resistance, junction to Ambient	833	°C/W
T_{stg}	storage temperature range	-55 to +150	°C
T_J	junction temperature	150	°C

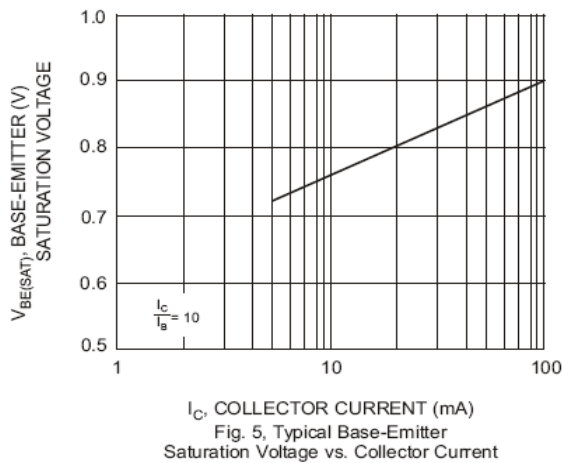
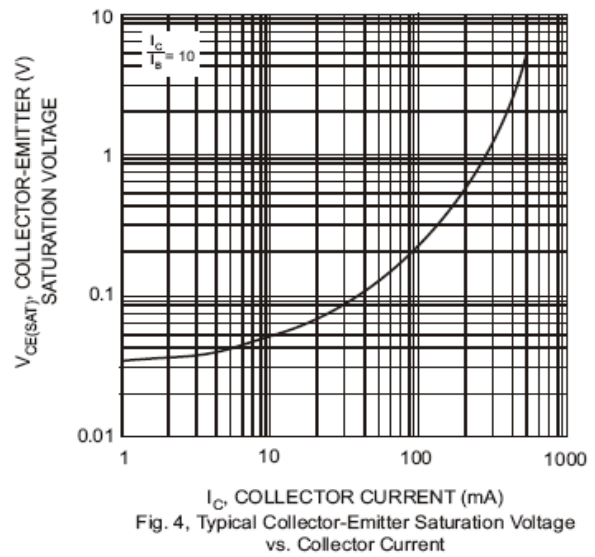
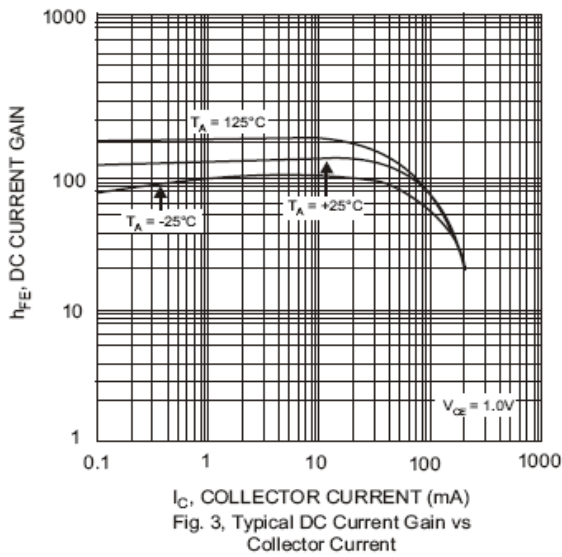
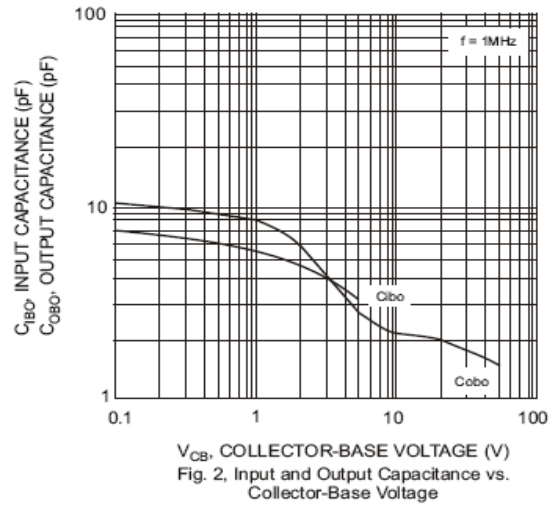
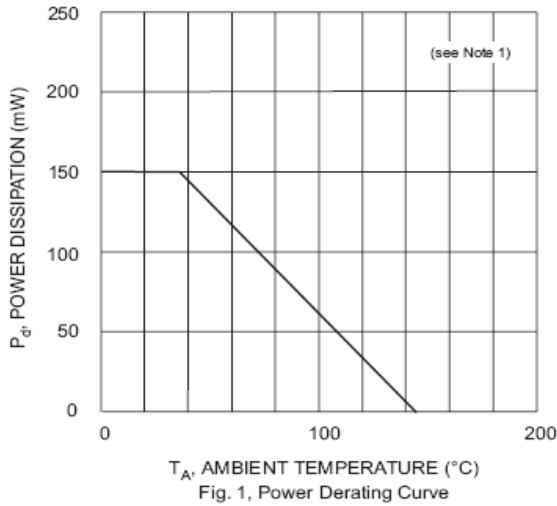


ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakown voltage	$I_C=-10\mu A, I_E=0$	-40		
$V_{(BR)CEO}$	Collector- emitter breakown voltage	$I_C=-1.0mA, I_B=0$	-40		
$V_{(BR)BEO}$	Emitter-base breakown voltage	$I_E=-10\mu A, I_C=0$	-5		
I_{CBO}	Collector cut-off current	$I_E=0, V_{CB}=-30V$		-50	nA
I_{EBO}	Emitter cut-off current	$I_C=0, V_{EB}=-5V$		-50	nA
I_{CEX}	collector cut-off current	$V_{CE}=-30V, V_{EB(OFF)}=-3.0V$		-50	nA
I_{BL}	Base cut-off current	$V_{CE}=-30V, V_{EB(OFF)}=-3.0V$		-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	$I_C=-10mA, I_B=-1mA$		-250	mV
		$I_C=-50mA, I_B=-5mA$		-400	mV
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C=-10mA; I_B=-1mA$	-650	-850	mV
		$I_C=-50mA; I_B=-5mA$		-950	mV
C_{obo}	Output capacitance	$I_E=0, V_{CB}=-5V, f=1MHz$		4.5	pF
C_{ibo}	Input capacitance	$I_C=0, V_{BE}=-0.5V, f=1MHz$		10	pF
f_T	transition frequency	$I_C=-10mA, V_{CE}=-20V, f=100MHz$	250		MHz
t_d	delay time	$I_C=-10mA, I_{B1}=-1mA, V_{BE(off)}=-0.5V$	-	35	ns
t_r	rise time	$V_{CC}=-3.0V$	-	35	ns
t_s	storage time	$V_{CC}=-3.0V, I_C=-10mA$	-	225	ns
t_f	fall time	$I_{B1}=I_{B2}=-1mA$	-	75	ns



TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

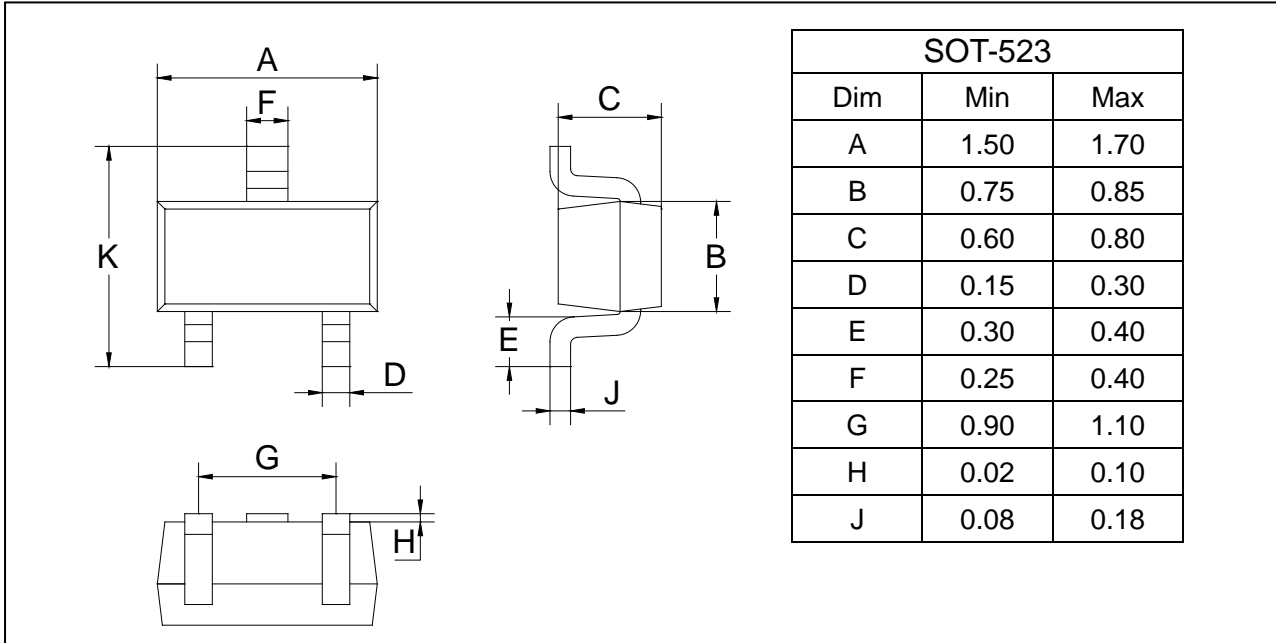




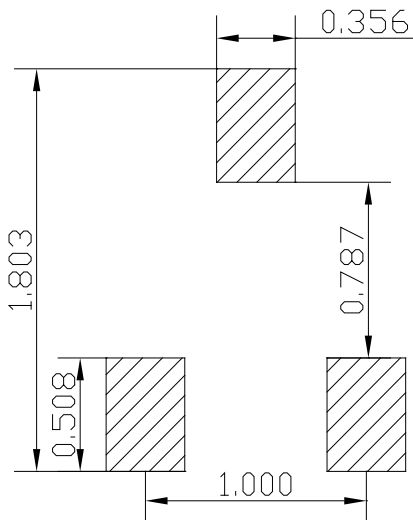
PACKAGE OUTLINE

Plastic surface mounted package

SOT-523



SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
MMBT3906T	SOT-523	3000pcs / Tape & Reel