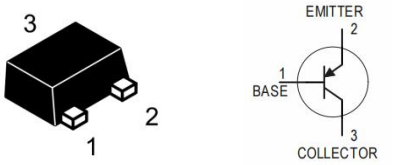
SOT-723 Plastic-Encapsulate Transistors

Transistor (PNP)

Features and benefits

- Complementary to MMBT3904G
- Small package saves board space

Schematic & Pin configuration



Ordering information

Device	Marking	Shipping
MMBT3906G	3N	8000/Tape & Reel

Maximum Ratings (T_A = 25 °C, unless otherwise specified)

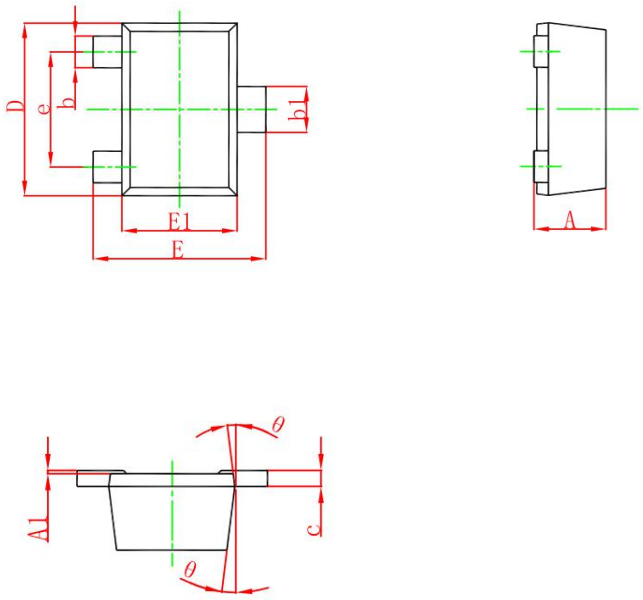
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	-0.2	A
Power Dissipation	P_C	0.1	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	1250	°C/W
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-50 to +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=-10μA,IE=0	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA,IB=0	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA,IC=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-40V,I_E=0			-100	nA
Collector cut-off current	I_{CEX}	V_{CE}=-30V,$V_{EB(off)}$=-3V			-50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V,I_C=0			-100	nA
DC current gain	$h_{FE(1)}$	V_{CE}=-2V,I_C=-100mA	30			
	$h_{FE(2)}$	V_{CE}=-1V,I_C=-50mA	60			
	$h_{FE(3)}$	V_{CE}=-1V,I_C=-10mA	100		300	
	$h_{FE(4)}$	V_{CE}=-1V,I_C=-0.1mA	60			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA,I_B=-5mA			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-50mA,I_B=-5mA			-0.95	V
Transition frequency	f_T	V_{CE}=-20V,I_C=-10mA,f=100MHz	250			MHz
Output capacitance	C_{ob}	V_{CB}=5V,I_E=0,f=1MHz			4	pF
Delay time	t_d	V_{CC}=-3V,$V_{BE(off)}$=0.5V,			35	ns
Rise time	t_r	I_C=-10mA,I_{B1}=-1mA			35	ns
Storage	t_s	V_{CC}=-3V,I_C=-10mA,			225	ns
Fall time	t_f	I_{B1}=-I_{B2}=-1mA			75	ns

Package Outline Dimensions

SOT723



Symbol	Dimensions In Millimet	
	Min	Max
A	0.42	0.50
A1	0.00	0.05
b	0.16	0.28
b1	0.25	0.35
c	0.07	0.16
D	1.10	1.30
e	0.8TYP	
E	1.10	1.30
E1	0.75	0.85
θ	8°	10°

Suggested Pad Layout (mm)