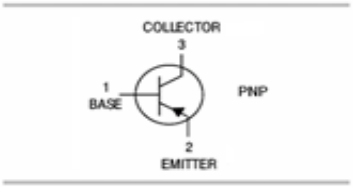
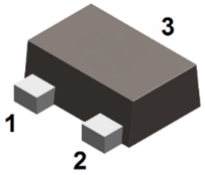
MMBT2907AM

SOT-723 Bipolar Transistor(PNP)

Features

- Epitaxial planar die construction
- Complimentary to MMBT2222AM
- Ultra-small surface mount package





SOT-723

Mechanic al Data

- Case: SOT-723
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
MMBT2907AM	SOT-723	10000 pcs / Tape & Reel	2F

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

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	-60	V
Collector-Emitter Breakdown Voltage	V_{CEO}	-60	V
Emitter-Base Breakdown Voltage	V_{EBO}	-5	V
Collector Current (Continuous)	I_C	-0.6	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T_A = 25°C) *1	P_D	265	mW
Thermal Resistance (Junction-to-Ambient) *1	$R_{\theta JA}$	417	°C/W
Operating junction Temperature	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Note 1: FR−5 = 1.0 X 0.75 X 0.062 in

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Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = -10μA, I_E = 0	-60	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = -10mA, I_B = 0	-60	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = -10μA, I_C = 0	-5	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = -50V, I_E = 0	-	-	-10	nA
Collector Cut-off Current	I_{CEX}	V_{CE} = -30V, $V_{EB(OFF)}$ = -0.5V	-	-	-50	nA
Base Cut-off Current	I_{BL}	V_{CE} = -30V, $V_{EB(OFF)}$ = -0.5V	-	-	-50	nA
DC Current Gain	h_{FE}	V_{CE} = -10V, I_C = -0.1mA	75	-	-	-
		V_{CE} = -10V, I_C = -1mA	100	-	-	-
		V_{CE} = -10V, I_C = -10mA	100	-	-	-
		V_{CE} = -10V, I_C = -150mA	100	-	300	-
		V_{CE} = -10V, I_C = -500mA	50	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	I_C = -500mA, I_B = -50mA	-	-	-1.6	V
		I_C = -150mA, I_B = -15mA	-	-	-0.4	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	I_C = -500mA, I_B = -50mA	-	-	-2.6	V
		I_C = -150mA, I_B = -15mA	-	-	-1.3	V
Transition Frequency	f_T	I_C = -50mA, V_{CE} = -20V f = 100MHz	200	-	-	MHz
Collector Output Capacitance	C_{OBO}	V_{CB} = -10V, I_E = 0, f = 1MHZ	-	6.5	-	pF
Input Capacitance	C_{IBO}	V_{EB} = -2V, I_C = 0, f = 1MHz	-	-	8	pF
Delay Time	t_d	V_{CC} = -30V, I_C = -150mA I_{B1} = -15mA	-	-	10	ns
Rise Time	t_r		-	-	40	ns
Storang Time	t_s	V_{CC} = -6V, I_C = -150mA I_{B1} = I_{B2} = -15mA	-	-	225	ns
Fall Time	t_f		-	-	60	ns

Ratings and Characteristics Curves (@ T_A = 25°C unless otherwise specified)

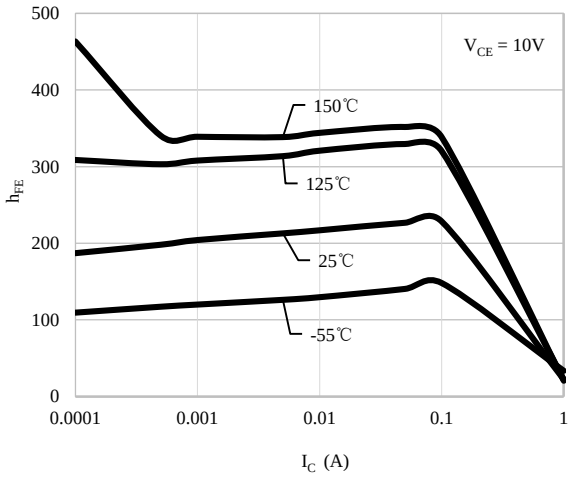

Fig 1 h_{FE} vs. I_C

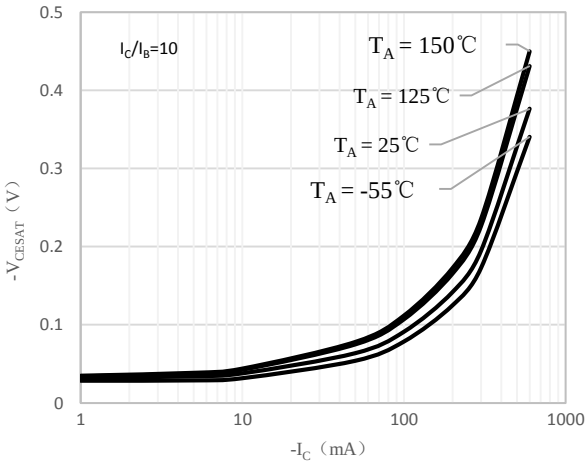

Fig 2 $V_{CE(sat)}$ vs. I_C

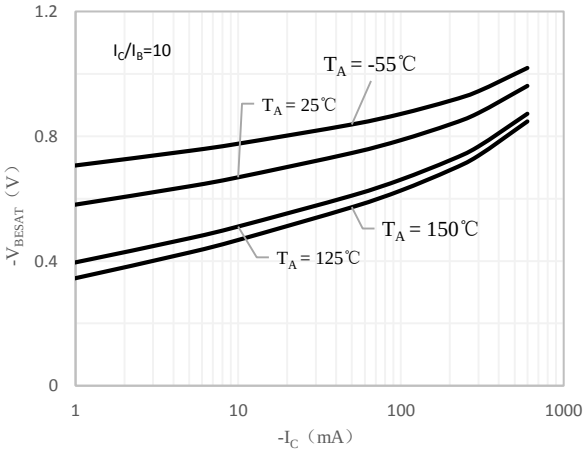

Fig 3 $V_{BE(sat)}$ vs. I_C

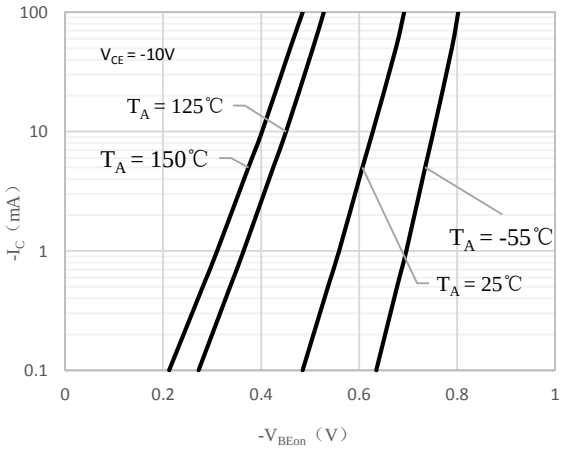

Fig 4 $V_{BE(ON)}$ vs. I_C

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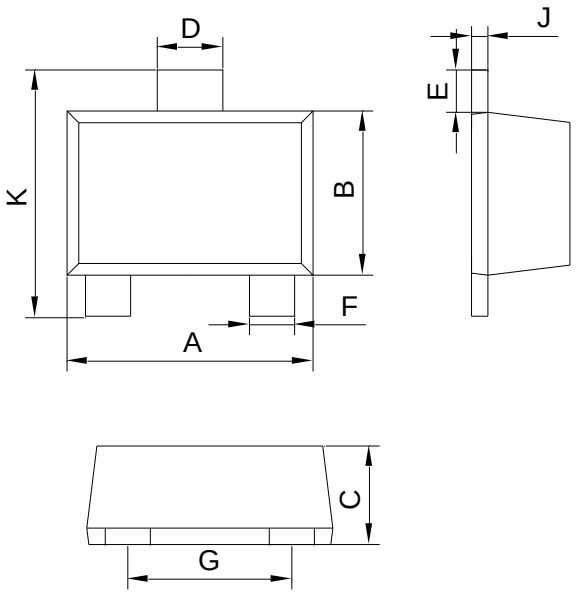
Package Outline Dimensions (Unit: mm)



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Dimension	**Min.**	**Max.**
A	1.10	1.30
B	0.70	0.90
C	0.40	0.54
D	0.22	0.42
E	0.10	0.30
F	0.12	0.32
G	0.70	0.90
J	0.08	0.15
K	1.10	1.30

Mounting PAD Layout (Unit: mm)

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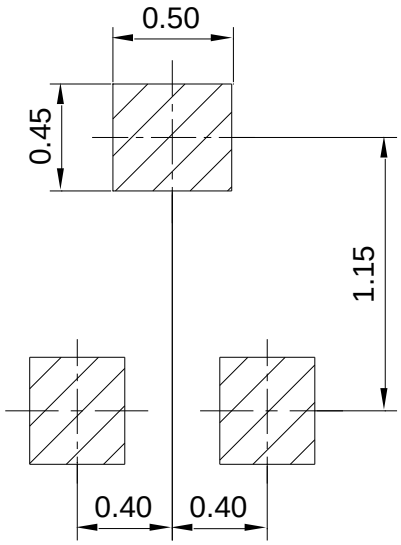

Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT -723	8000pcs	7inch	120,000pcs	203×203×195	480,000pcs	438×438×220