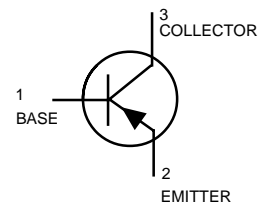
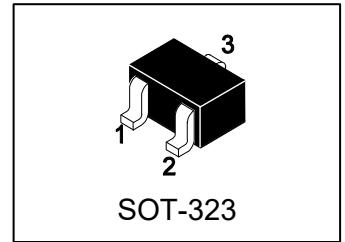


MBT2907AW

S-MBT2907AW

General Purpose Transistors PNP Silicon



1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
MBT2907AW	20	3000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	V _{CEO}	-60	V
Collector–Base Voltage	V _{CBO}	-60	V
Emitter–Base Voltage	V _{EBO}	-5	V
Collector Current — Continuous	I _C	-600	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, (Note 1) @ TA = 25°C	PD	225	mW
Thermal Resistance, Junction–to–Ambient(Note 1)	R _{θJA}	556	°C/W
Junction–to–Case(Note 1)	R _{θJC}	300	°C/W
Junction and Storage temperature	T _J , T _{stg}	-55~+150	°C

1. 30.0mm×25.0mm×1.6mm(FR4)



5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)
OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage (IC = -10 mA, IB = 0)	VBR(CEO)	-60	-	-	V
Collector–Base Breakdown Voltage (IC = -10 μA, IE = 0)	VBR(CBO)	-60	-	-	V
Emitter–Base Breakdown Voltage (IE = -10 μA, IC = 0)	VBR(EBO)	-5	-	-	V
Collector Cutoff Current (VCE = -30 V, VEB(off) = -0.5V)	ICEX	-	-	-50	nA
Base Cutoff Current (VCE = -30 V, VEB(off) = -0.5V)	IBL	-	-	-50	nA

ON CHARACTERISTICS (Note 2.)

DC Current Gain (IC = -0.1 mA, VCE = -10 V)	HFE	75	-	-	
(IC = -1.0 mA, VCE = -10 V)		100	-	-	
(IC = -10 mA, VCE = -10 V)		100	-	-	
(IC = -150 mA, VCE = -10 V)		100	-	300	
(IC = -500 mA, VCE = -10 V)		50	-	-	
Collector–Emitter Saturation Voltage (IC = -150 mA, IB = -15 mA)	VCE(sat)	-	-	-0.4	V
(IC = -500 mA, IB = -50 mA)		-	-	-1.6	
Base–Emitter Saturation Voltage (IC = -150 mA, IB = -15 mA)	VBE(sat)	-	-	-1.3	V
(IC = -500 mA, IB = -50 mA)		-	-	-2.6	

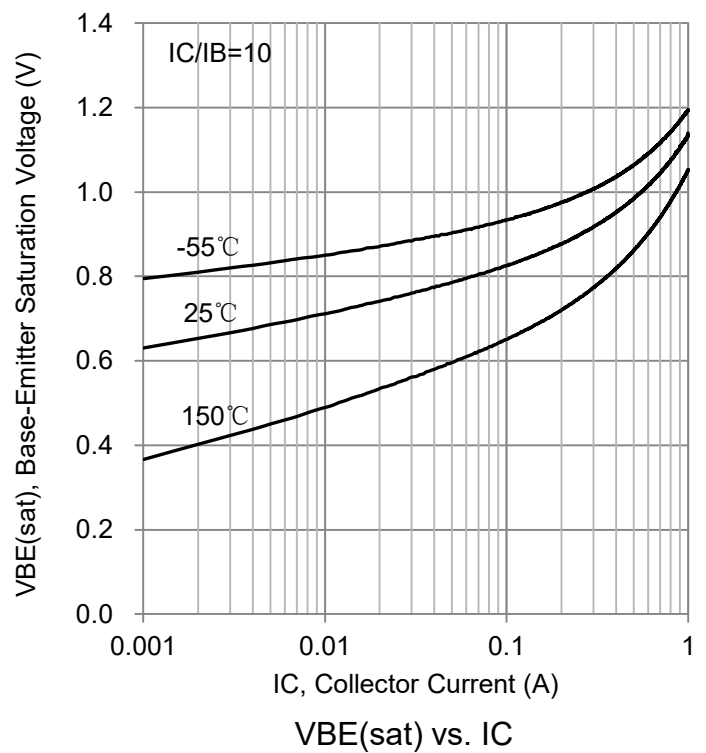
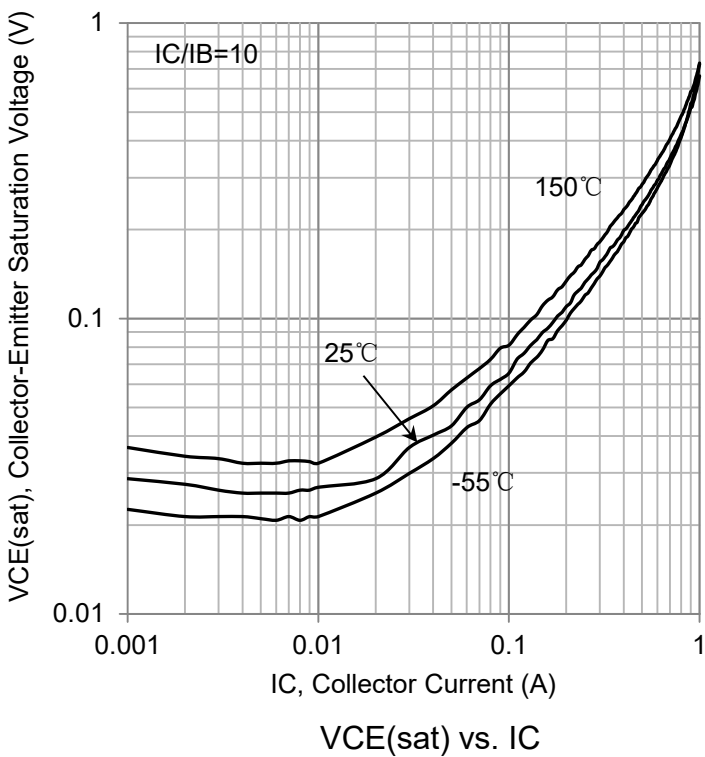
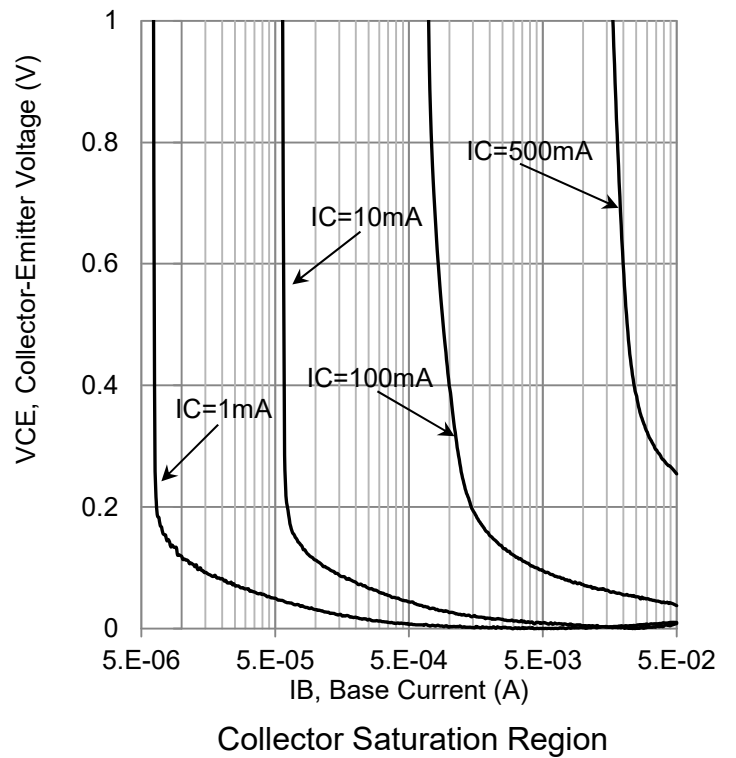
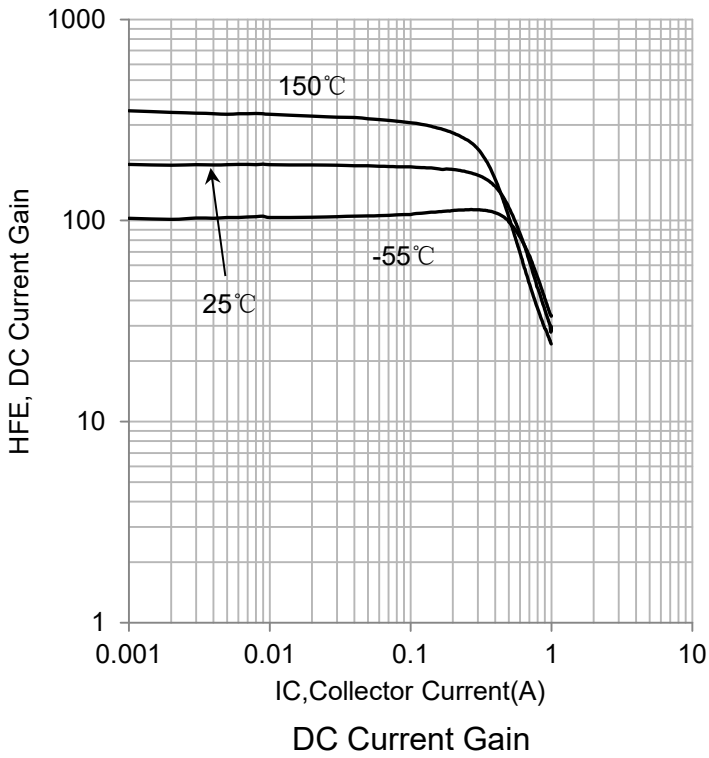
SMALL–SIGNAL CHARACTERISTICS

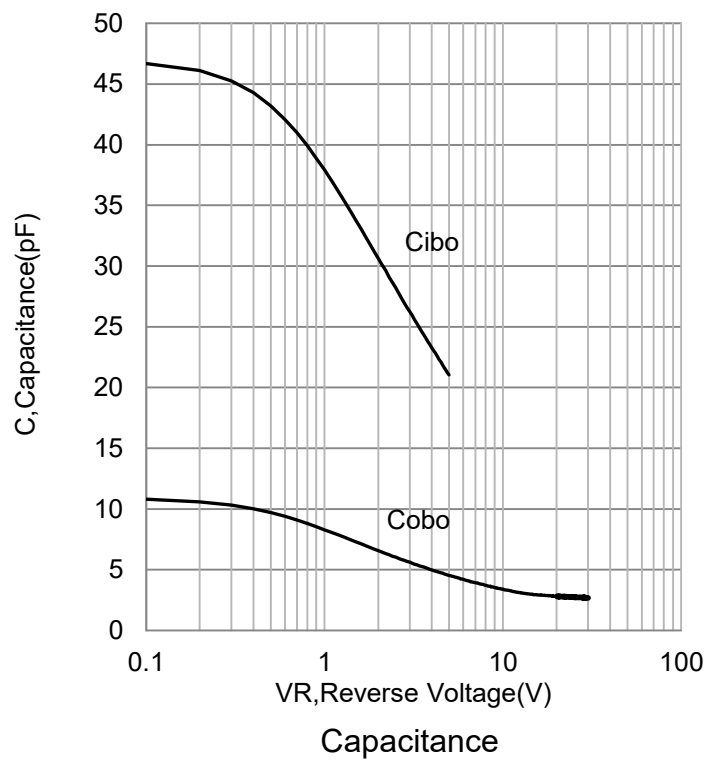
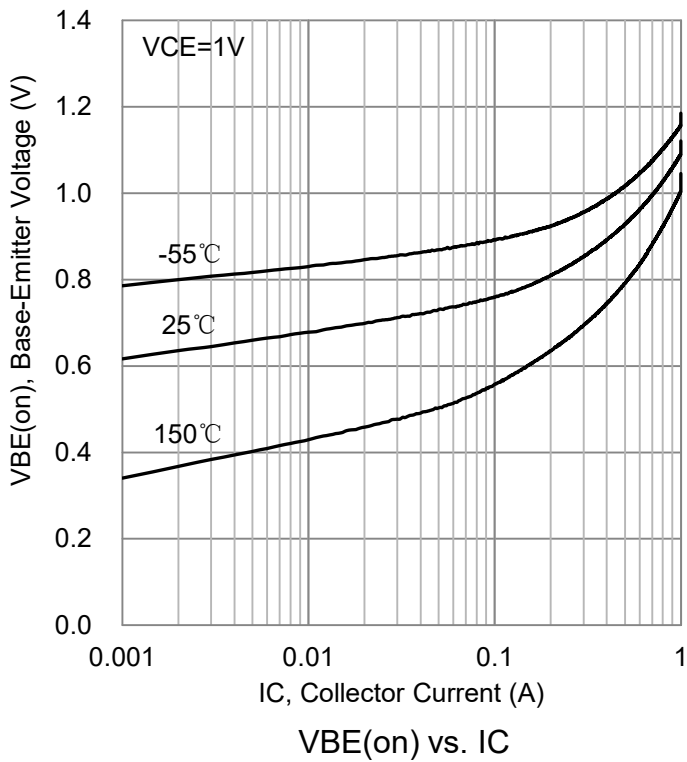
Current–Gain — Bandwidth Product (IC = -50mA, VCE= -20V, f = 100MHz)	fT	200	-	-	MHz
Output Capacitance (VCB = -10 V, IE = 0, f = 1.0 MHz)	Cobo	-	-	8	pF
Input Capacitance (VEB = -2 V, IC = 0, f = 1.0 MHz)	Cibo	-	-	30	pF

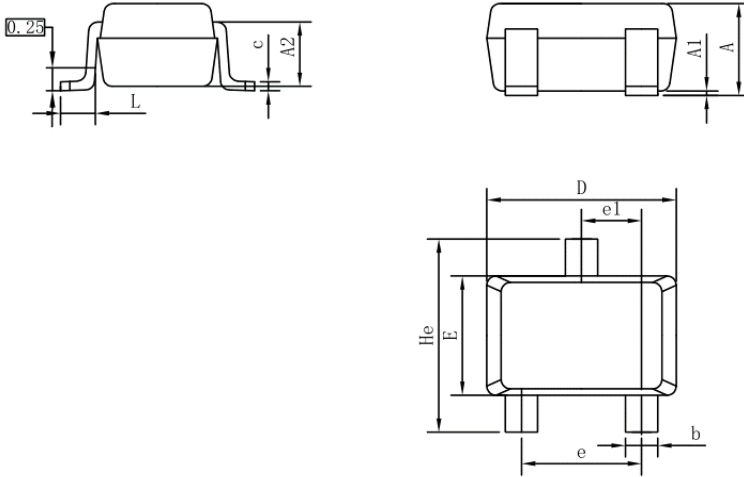
SWITCHING CHARACTERISTICS

Turn–On Time	(VCC = -30 V, IC = -150 mA, IB1 = -15 mA)	ton	-	-	45	ns
Delay Time		td	-	-	10	
Rise Time		tr	-	-	40	
Storage Time	(VCC = -6 V, IC = -150 mA, IB1 = IB2 = -15 mA)	ts	-	-	225	
Fall Time		tf	-	-	60	
Turn–Off Time		toff	-	-	280	

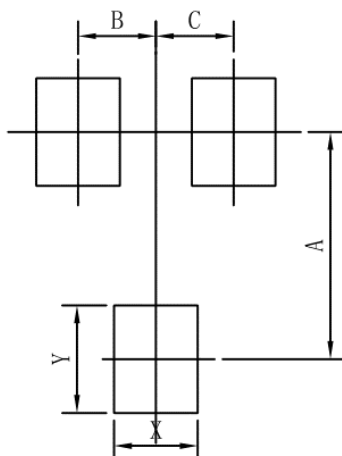
 2.Pulse Test: Pulse Width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 2.0\%$.


6. ELECTRICAL CHARACTERISTICS CURVES


6. ELECTRICAL CHARACTERISTICS CURVES(Con.)


7.OUTLINE AND DIMENSIONS


SOT-323			
DIM	MIN	NOR	MAX
A	0.80	0.95	1.00
A1	0.00	0.05	0.10
A2	0.7 REF		
b	0.30	0.35	0.40
c	0.10	0.15	0.25
D	1.80	2.05	2.20
E	1.15	1.30	1.35
e	1.20	1.30	1.40
e1	0.65 BSC		
L	0.20	0.35	0.56
He	2.00	2.10	2.40
ALL Dimension in mm			

8.SOLDERING FOOTPRINT


SOT-323	
DIM	MIN
A	1.90
B	0.65
C	0.65
X	0.70
Y	0.90

