

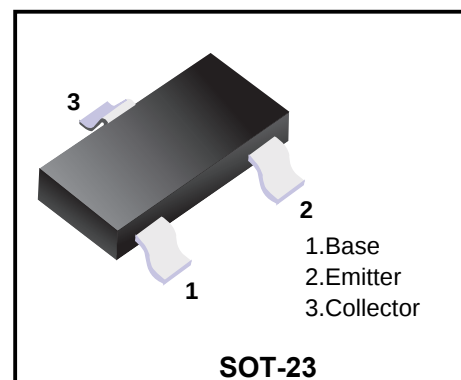
Plastic-Encapsulate Transistors
TRANSISTOR(PNP)

Features

- ◆Complementary to MMBTA44
- ◆Power Dissipation of 350mW
- ◆High Stability and High Reliability

Mechanical Data

- ◆SOT-23 Small Outline Plastic Package.
- ◆Epoxy UL: 94V-0.
- ◆Mounting Position: Any.



Marking Code

MMBTA94

4D

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

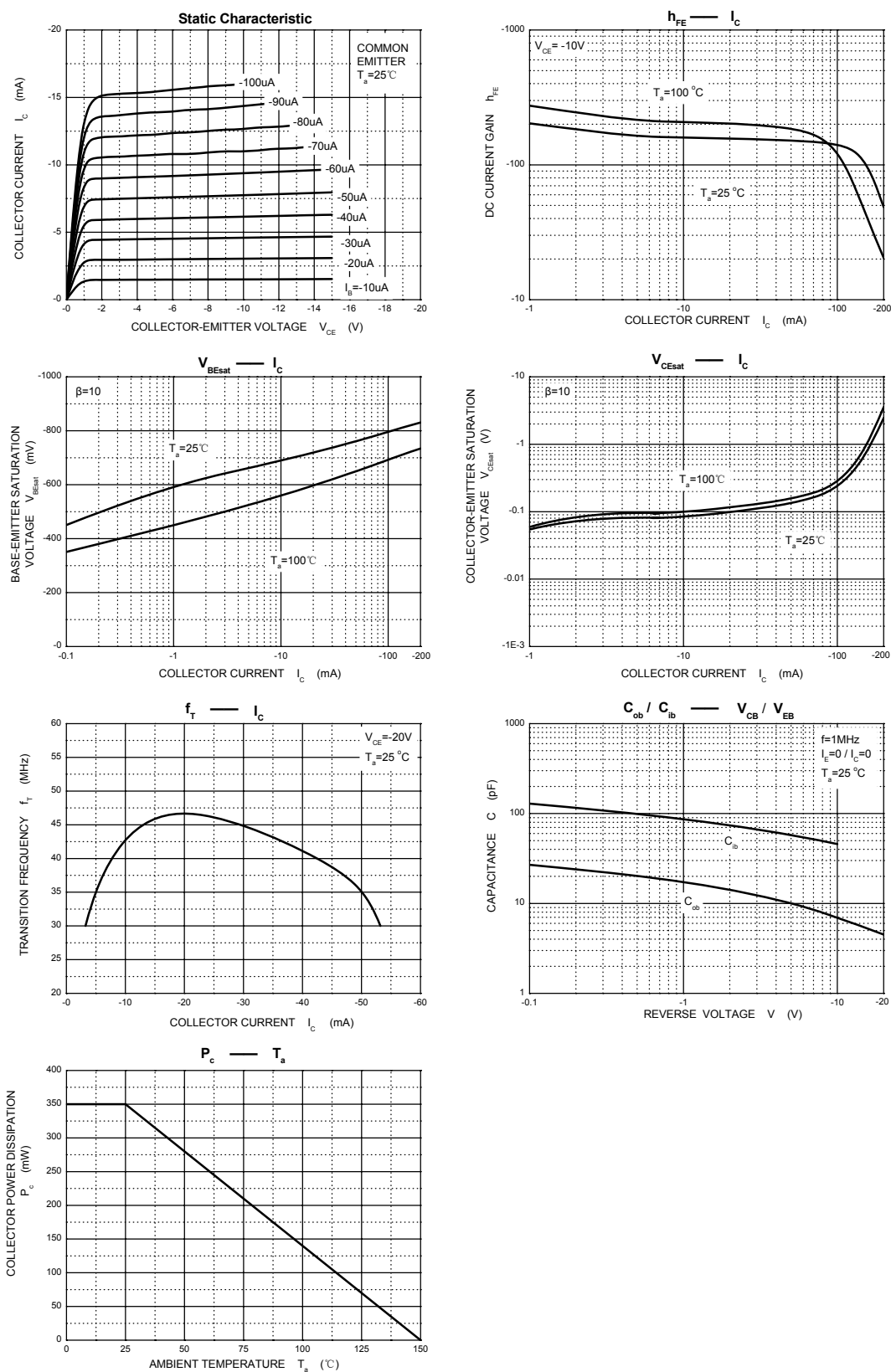
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-400	V
Collector-Emitter Voltage	V_{CEO}	-400	V
Emitter -Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-200	mA
Collector Power Dissipation	P_C	350	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-50-+150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$	357	°C/W

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbols	Test Condition	Limits			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-400	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C = -1mA, I_B = 0$	-400	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -400V, I_E = 0$		-	-100	nA
Collector cut-off current	I_{CEO}	$V_{CE} = -400V, I_E = 0$		-	-5	uA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V, I_C = 0$		-	-100	nA
DC current gain	$h_{FE(1)}^*$	$V_{CE} = -10V, I_C = -10mA$	80	-	300	
	$h_{FE(2)}^*$	$V_{CE} = -10V, I_C = -1mA$	70	-		
	$h_{FE(3)}^*$	$V_{CE} = -10V, I_C = -50mA$	40	-		
	$h_{FE(4)}^*$	$V_{CE} = -10V, I_C = -100mA$	40	-		
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C = -10mA, I_B = -1mA$	-	-	-0.2	V
	$V_{CE(sat)}^*$	$I_C = -50mA, I_B = -5mA$	-	-	-0.3	V
Base -emitter saturation voltage	$V_{BE(sat)}^*$	$I_C = -10mA, I_B = -1mA$	-	-	-0.75	V
Transition frequency	f_T	$V_{CE} = -20V, I_C = 10mA, f = 30MHz$	50	-	-	MHz

*Pulse test: pulse width≤300us, duty cycle≤2.0%

Typical characteristics



Ordering information

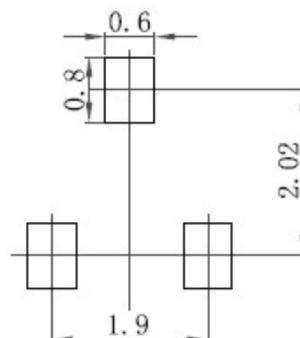
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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