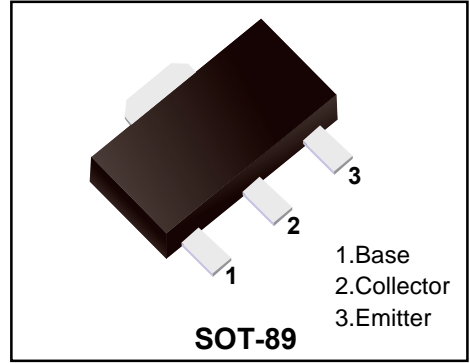


Plastic-Encapsulate Transistors
TRANSISTOR(PNP)


Marking Code	
MMBTA94SI	A94

FEATURES

- ◆Power Dissipation of 500mW
- ◆High Breakdown Voltage
- ◆Low Collector-Emitter Saturation Voltage

MECHANICAL DATA

- ◆SOT-89 Small Outline Plastic Package
- ◆Epoxy UL: 94V-0
- ◆Mounting Position: Any

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

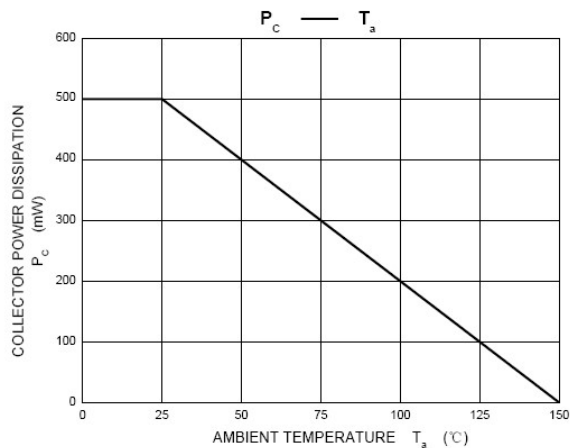
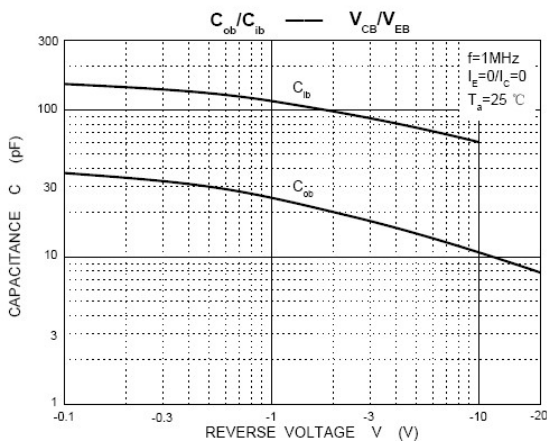
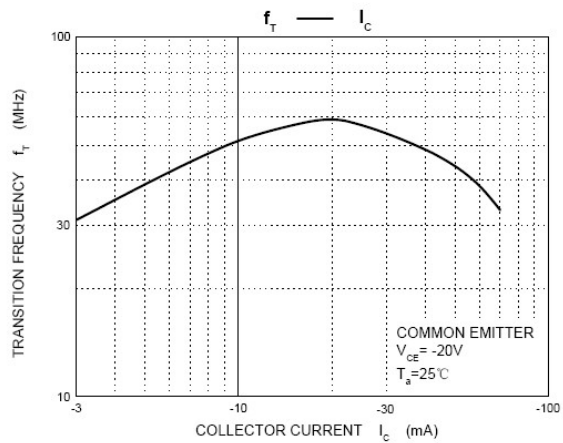
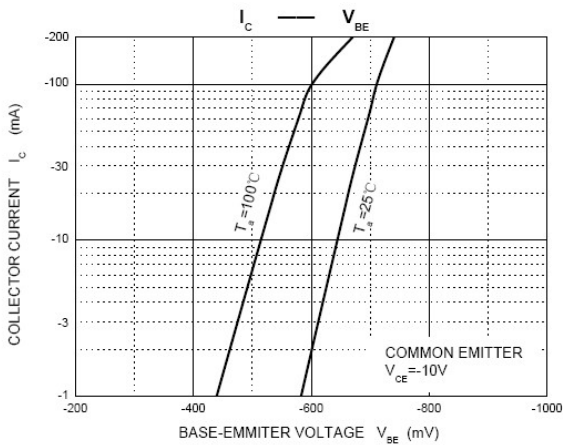
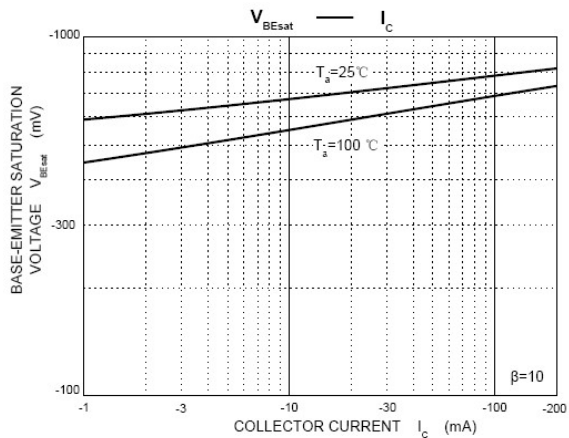
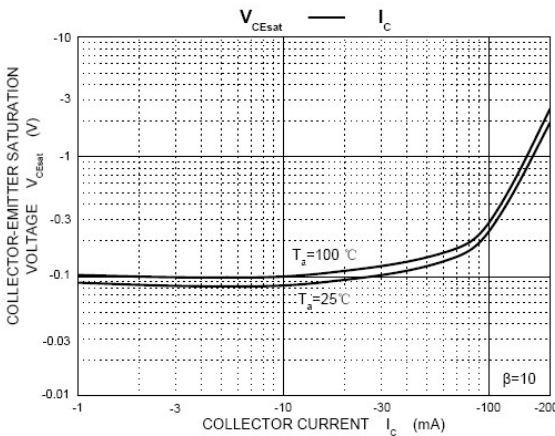
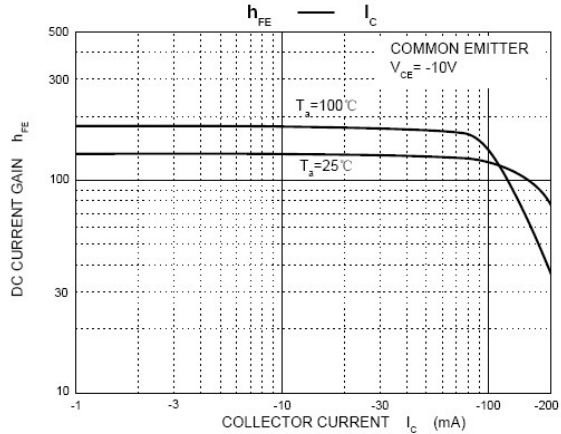
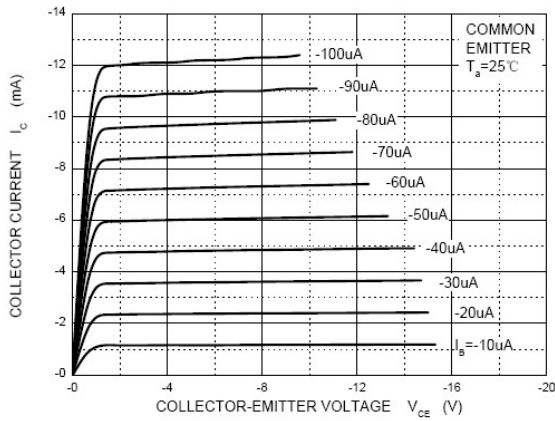
Characteristics	Symbols	Value	Units
Collector-Base Voltage	V_{CB0}	-400	V
Collector-Emitter Voltage	V_{CE0}	-400	V
Emitter -Base Voltage	V_{EB0}	-5	V
Collector Current-Continuous	I_c	-200	mA
Collector Current-pulsed	I_{CM}	-300	mA
Collector Power Dissipation	P_c	500	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55 to +150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$	250	°C/W

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

Parameter	Test Conditions	Symbol	Min	Typ.	Max	Unit
Collector-base breakdown voltage	$I_C=-100\mu A, I_E=0$	$V_{(BR)CBO}$	-400			V
Collector-emitter breakdown voltage *	$I_C=-1mA, I_B=0$	$V_{(BR)CEO}$	-400			V
Emitter-base breakdown voltage	$I_E=-100\mu A, I_C=0$	$V_{(BR)EBO}$	-5			V
Collector cut-off current	$V_{CB}=-400V, I_E=0$	I_{CBO}			-100	nA
	$V_{CE}=-400V, I_B=0$	I_{CEO}			-5	uA
Emitter cut-off current	$V_{EB}=-4V, I_C=0$	I_{EBO}			-100	nA
DC current gain *	$V_{CE}=-10V, I_C=-1mA$	$h_{FE(1)}$	70			
	$V_{CE}=-10V, I_C=-10mA$	$h_{FE(2)}$	80	300		
	$V_{CE}=-10V, I_C=-50mA$	$h_{FE(3)}$	80			
	$V_{CE}=-10V, I_C=-100mA$	$h_{FE(4)}$	60			
Collector-emitter saturation voltage *	$I_C=-10mA, I_B=-1mA$	$V_{CE(sat)}$			-0.2	V
	$I_C=-50mA, I_B=-5mA$				-0.3	V
Base -emitter saturation voltage *	$I_C=-10mA, I_B=-1mA$	$V_{BE(sat)}$			-0.75	V
Transition frequency	$V_{CE}=-20V, I_C=10mA, f=30MHz$	f_T	50			MHz

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

Typical Characteristics



Ordering information

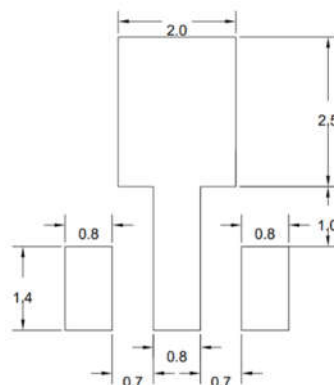
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel,7"reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-89

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
b	0.32	0.52	0.013	0.020
b1	0.38	0.58	0.015	0.023
c	0.35	0.45	0.014	0.018
D	4.40	4.60	0.173	0.181
D1	1.45	1.65	0.057	0.065
D2	1.70	1.80	0.067	0.071
E	2.30	2.60	0.091	0.102
E1	3.95	4.25	0.156	0.167
E2	1.80	2.00	0.071	0.079
e	1.40	1.60	0.055	0.063
e1	2.80	3.20	0.110	0.126
L	0.90	1.20	0.035	0.047

The recommended mounting pad size



UNIT:MM

Disclaimer

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