

Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

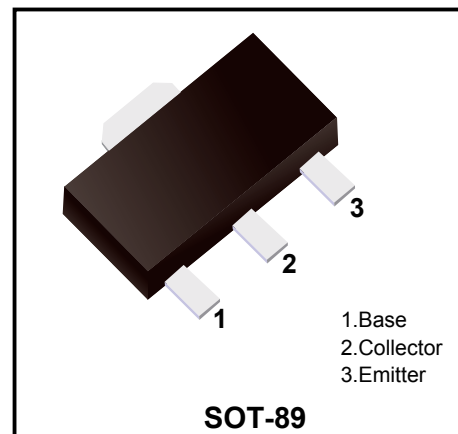
Features

- ◆ Low Collector-Emitter Saturation Voltage
- ◆ High Breakdown Voltage

Marking Code

MMBTA92U

A92



Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	300	V
Collector Emitter Voltage	$-V_{CEO}$	300	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	500	mA
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at Ta = 25°C

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at $-I_C = 1 \text{ mA}$, $-V_{CE} = 10 \text{ V}$	h_{FE}	25	-	-
at $-I_C = 10 \text{ mA}$, $-V_{CE} = 10 \text{ V}$	h_{FE}	40	-	-
at $-I_C = 30 \text{ mA}$, $-V_{CE} = 10 \text{ V}$	h_{FE}	25	-	-
Collector Base Cutoff Current				
at $-V_{CB} = 200 \text{ V}$	$-I_{CBO}$	-	0.25	μA
Emitter Base Cutoff Current				
at $-V_{EB} = 3 \text{ V}$	$-I_{EBO}$	-	0.1	μA
Collector Base Breakdown Voltage				
at $-I_C = 100 \mu\text{A}$	$-V_{(BR)CBO}$	300	-	V
Collector Emitter Breakdown Voltage				
at $-I_C = 1 \text{ mA}$	$-V_{(BR)CEO}$	300	-	V
Emitter Base Breakdown Voltage				
at $-I_E = 100 \mu\text{A}$	$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage				
at $-I_C = 20 \text{ mA}$, $-I_B = 2 \text{ mA}$	$-V_{CE(sat)}$	-	0.5	V
Base Emitter Saturation Voltage				
at $-I_C = 20 \text{ mA}$, $-I_B = 2 \text{ mA}$	$-V_{BE(sat)}$	-	0.9	V
Gain Bandwidth Product				
at $-I_C = 10 \text{ mA}$, $-V_{CE} = 20 \text{ V}$, $f = 100 \text{ MHz}$	f_T	50	-	MHz
Collector Output Capacitance				
at $-V_{CB} = 20 \text{ V}$, $f = 1 \text{ MHz}$	C_{ob}	-	6	pF

Typical Characteristics

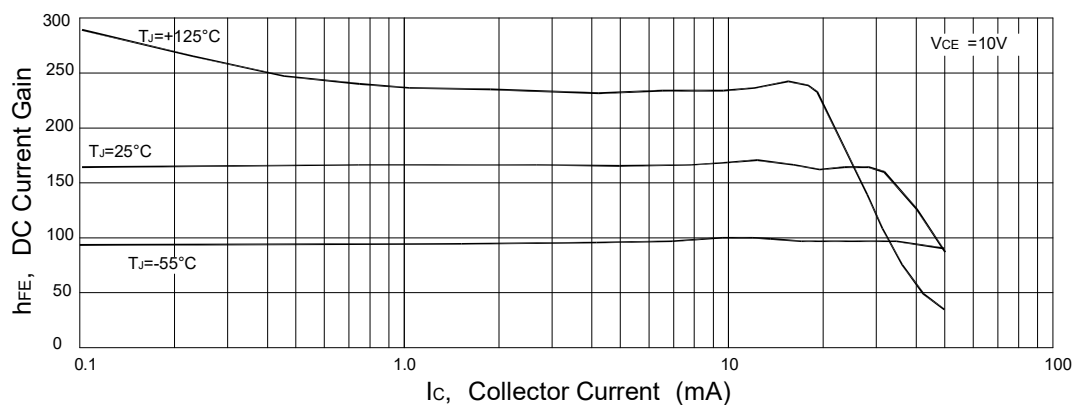


Figure 1. DC Current Gain

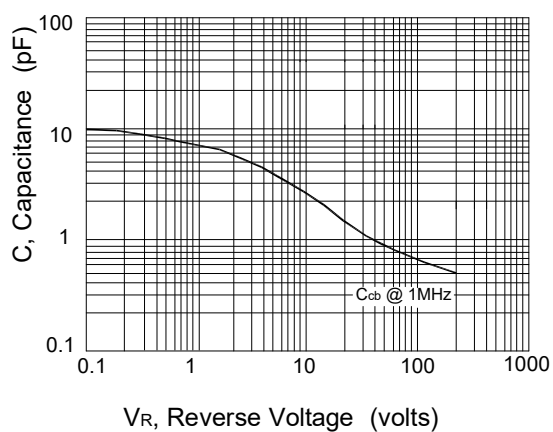


Figure 2. Capacitance

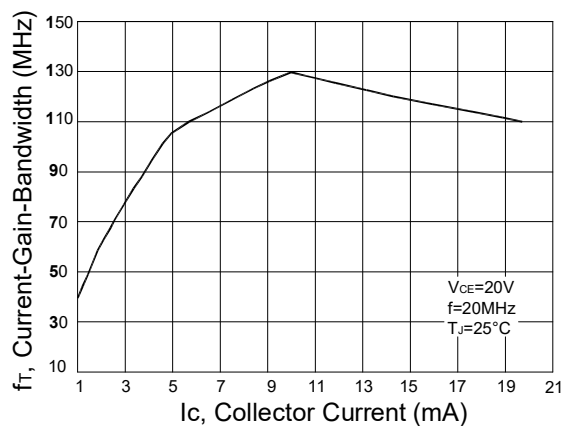
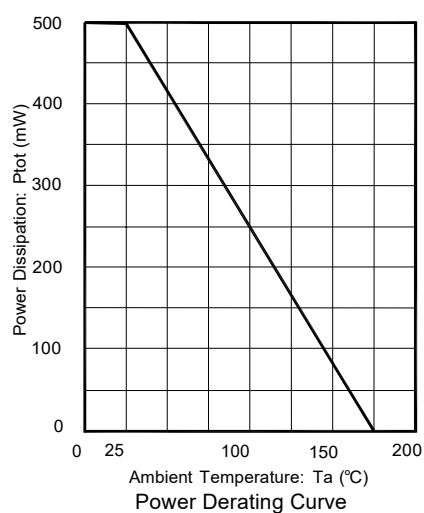


Figure 3. Current-Gain-Bandwidth



Ordering information

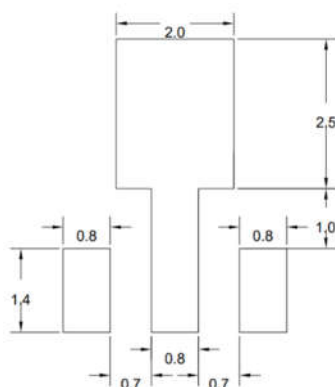
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

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

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