

**Descriptions**

- High voltage application
- Telephone application

**Features**

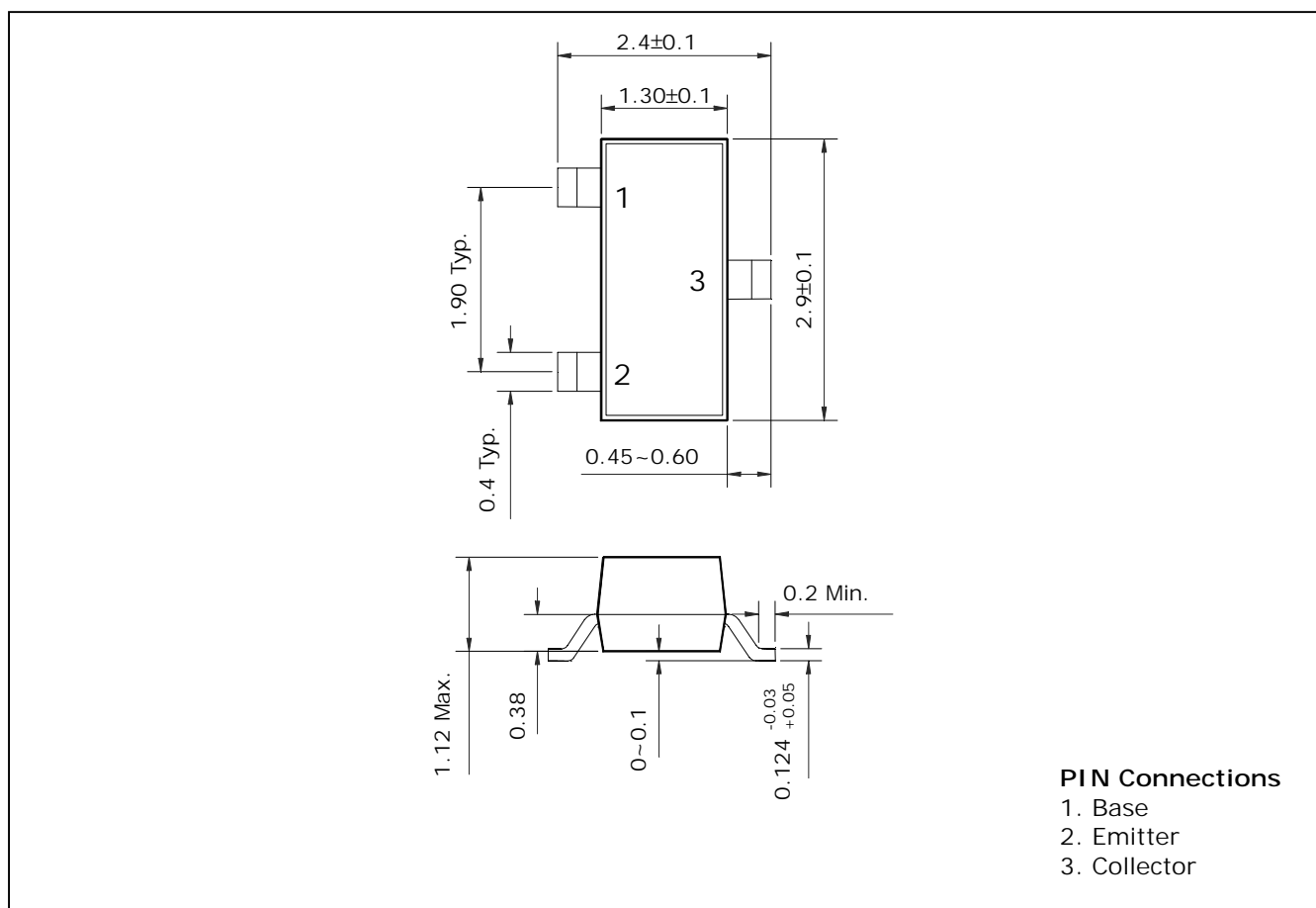
- Collector-Emitter voltage :  
 $V_{CE0} = \text{SBT92} : -300\text{V}$
- Complementary pair with SBT42

**Ordering Information**

Type NO.	Marking	Package Code
SBT92	M2A	SOT-23

**Outline Dimensions**

**unit : mm**



## Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	-300	V
Collector-Emitter voltage	$V_{CEO}$	-300	V
Emitter-Base voltage	$V_{EBO}$	-6	V
Collector current	$I_C$	-500	mA
Emitter current	$I_E$	500	mA
Collector dissipation	$P_C^*$	350	mW
Junction temperature	$T_J$	150	°C
Storage temperature	$T_{stg}$	-55 ~ 150	°C

\* : Package mounted on 99.5% alumina 10×8×0.6mm

## Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	$BV_{CBO}$	$I_C = -100\mu A, I_E = 0$	-300	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C = -1mA, I_B = 0$	-300	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E = -100\mu A, I_C = 0$	-6	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -200V, I_E = 0$	-	-	-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -3V, I_C = 0$	-	-	-0.1	$\mu A$
DC current gain	$h_{FE}^*$	$V_{CE} = -10V, I_C = -30mA$	40	-	-	-
Collector-Emitter saturation voltage	$V_{CE(sat)}^*$	$I_C = -20mA, I_B = -2mA$	-	-	-0.5	V
Base-Emitter saturation voltage	$V_{BE(sat)}^*$	$I_C = -20mA, I_B = -2mA$	-	-	-0.9	V
Transition frequency	$f_T$	$V_{CE} = -20V, I_C = -10mA$	50	-	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -20V, I_E = 0, f = 1MHz$	-	-	6	pF

\* : Pulse Tester : Pulse Width 300  $\mu s$ , Duty Cycle 2.0%

Electrical Characteristic Curves

Fig. 1  $h_{FE} - I_C$

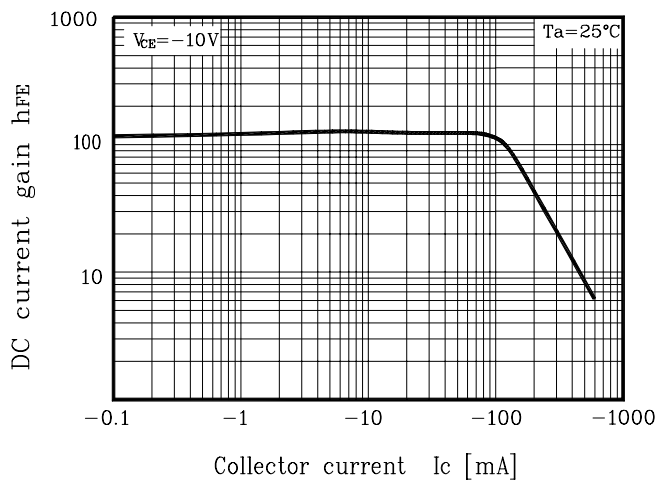


Fig. 2  $V_{CE(sat)}, V_{BE(sat)} - I_C$

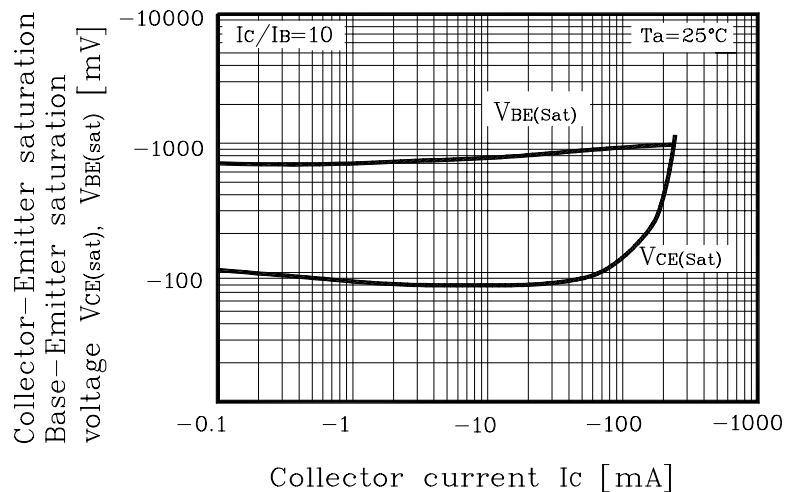


Fig. 3  $f_T - I_C$

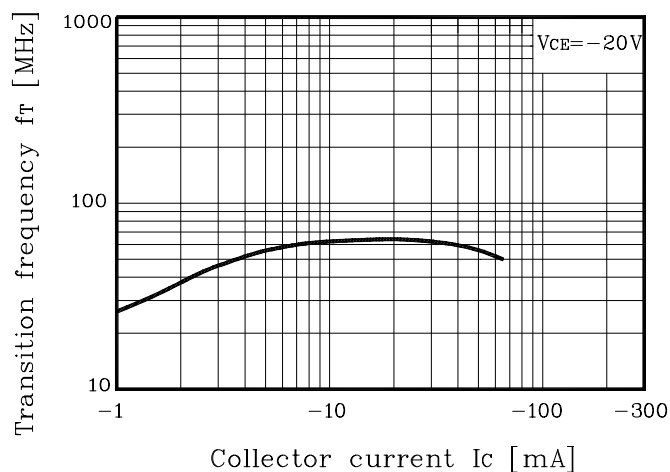


Fig. 4  $C_{ob} - V_R$

