

**Descriptions**

- General purpose application
- Switching application

**Features**

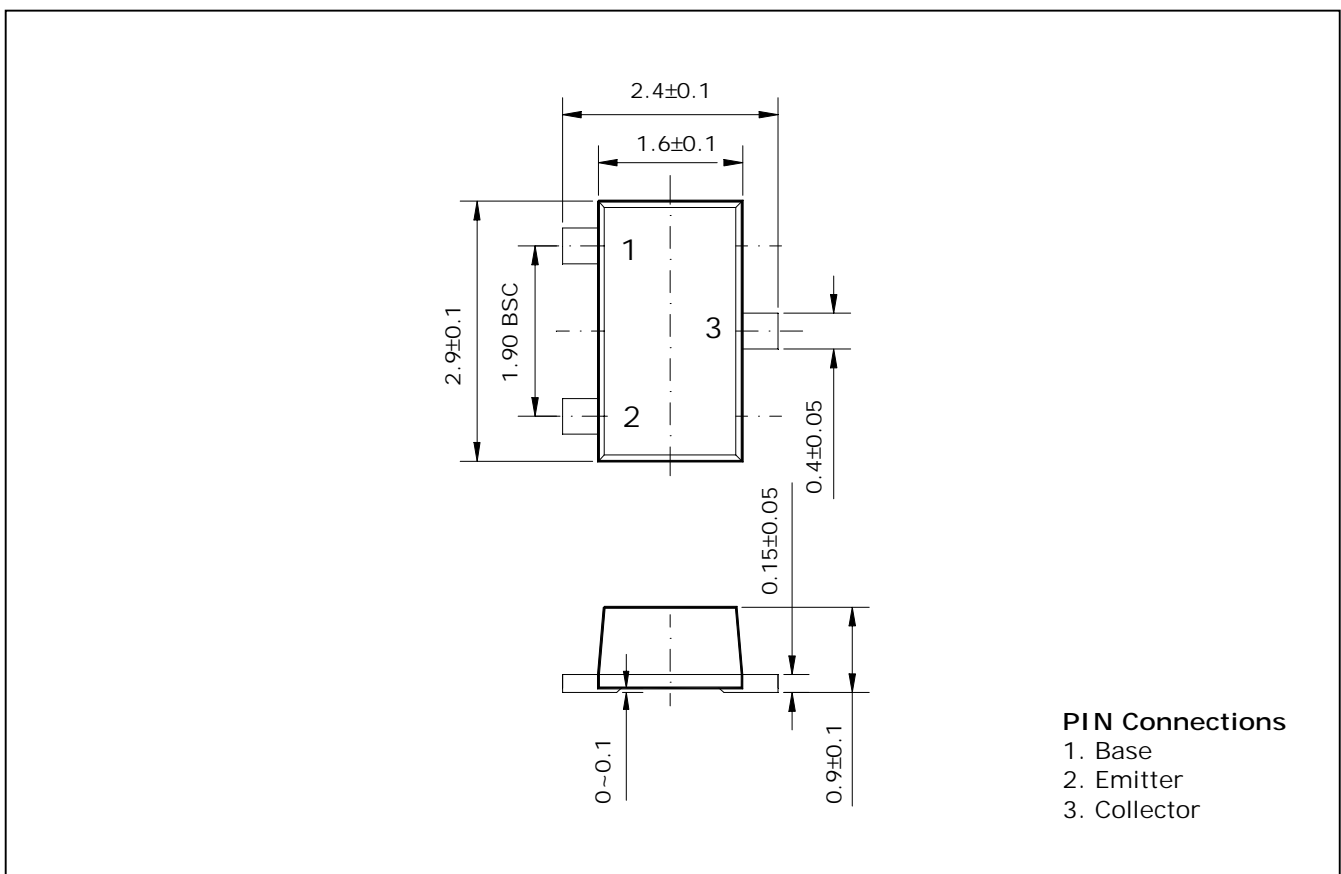
- Low Leakage current
- Low collector saturation voltage enabling low voltage operation
- Complementary pair with SBT2907F

**Ordering Information**

Type NO.	Marking	Package Code
SBT2222F	1B	SOT-23F

**Outline Dimensions**

**unit : mm**



## Absolute maximum ratings

Ta=25°C

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	60	V
Collector-Emitter voltage	$V_{CEO}$	30	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	600	mA
Collector dissipation	$P_C^*$	350	mW
Junction temperature	$T_J$	150	°C
Storage temperature range	$T_{stg}$	-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	$BV_{CBO}$	$I_C=10\mu A, I_E=0$	60	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C=10mA, I_B=0$	30	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E=10\mu A, I_C=0$	5	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$	-	-	20	nA
DC current gain	$h_{FE}$	$V_{CE}=10V, I_C=10mA$	100	-	-	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=150mA, I_B=15mA$	-	-	0.4	V
Transition frequency	$f_T$	$V_{CE}=20V, I_C=20mA, f=100MHz$	250	-	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	-	8	pF
Delay time	$t_d$	$V_{CC}=30V_{dc}, V_{BE(off)}=0.5V_{dc}, I_C=150mA_{dc}, I_{B1}=15mA_{dc}$	-	-	10	ns
Rise time	$t_r$		-	-	25	ns
Storage time	$t_s$		-	-	225	ns
Fall Time	$t_f$		-	-	60	ns

Electrical Characteristic Curves

Fig. 1  $P_C$ - $T_a$

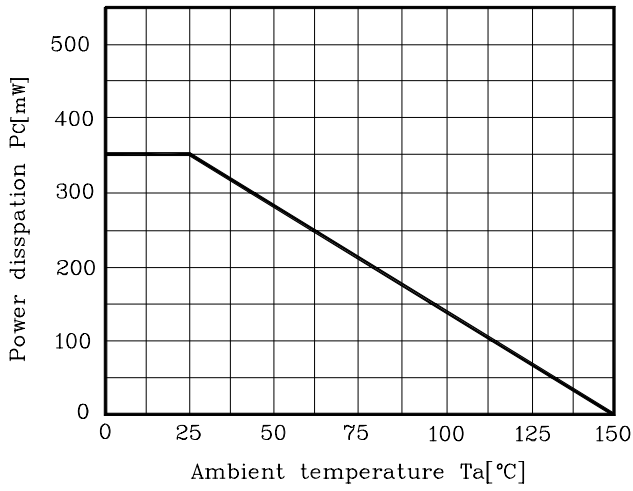


Fig. 2  $h_{FE}$ - $I_C$

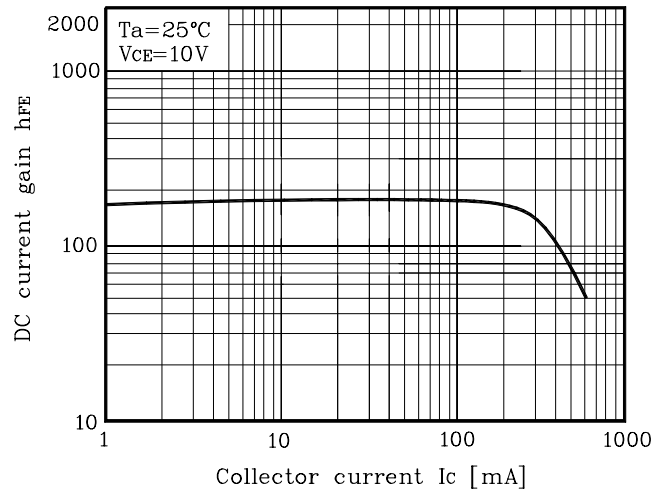


Fig. 3  $V_{CE(sat)}$ - $I_C$

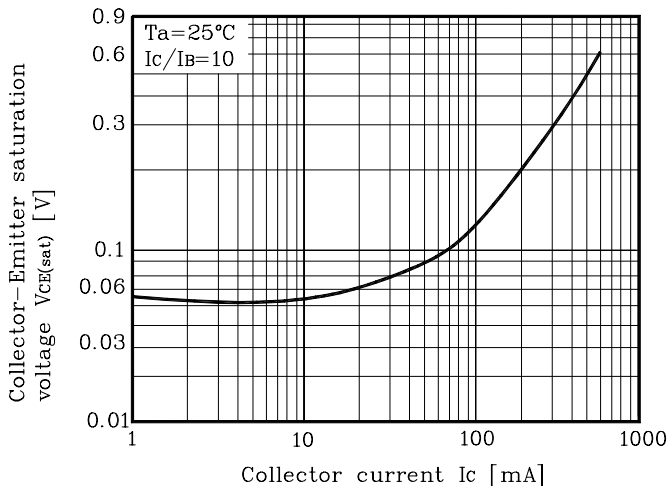


Fig. 4  $C_{ob}$ - $V_{CB}$

