

# Low Frequency Transistor (50V, 2A)

## 2SC5585H

The transistor of 500mA class which went only into 2125 size conventionally was attained in 1608 sizes.

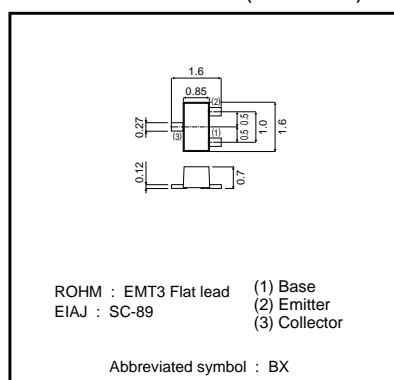
### ●Features

- 1) High current.
- 2) Low  $V_{CE(sat)}$ .  
 $V_{CE(sat)} \leq 250\text{mV}$   
 at  $I_C=200\text{mA}/I_B=10\text{mA}$
- 3) Flat lead

### ●Structure

For switching  
 For muting

### ●External dimensions (Units : mm)



### ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	15	V
Collector-emitter voltage	$V_{CEO}$	12	V
Collector current	$I_C$	500	mA
	$I_{CP}$	1	A *
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55~+150	°C

\*Single pulse  $P_w=1\text{ms}$

### ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	15	-	-	V	$I_C=10\mu\text{A}$
Collector-emitter breakdown voltage	$BV_{CEO}$	12	-	-	V	$I_C=1\text{mA}$
Emitter-base breakdown voltage	$BV_{EBO}$	6	-	-	V	$I_E=10\mu\text{A}$
Collector cutoff current	$I_{CBO}$	-	-	100	nA	$V_{CB}=15\text{V}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	90	250	mV	$I_C/I_B=200\text{mA}/10\text{mA}$
DC current transfer ratio	$h_{FE}$	270	-	680	-	$V_{CE}=2\text{V}, I_C=10\text{mA}$
Transition frequency	$f_T$	-	320	-	MHz	$V_{CE}=2\text{V}, I_E=-10\text{mA}, f=100\text{MHz}$
Output capacitance	$C_{ob}$	-	7.5	-	pF	$V_C=10\text{V}, I_E=0\text{A}, f=1\text{MHz}$

Transistors

●Packaging specifications

Type	h <sub>FE</sub>	Package	Taping
		Code	T2L
		Basic ordering unit (pieces)	8000
2SC5585H			○

●Electrical characteristic curves

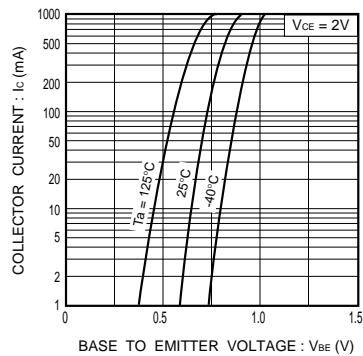


Fig.1 Grounded emitter propagation characteristics

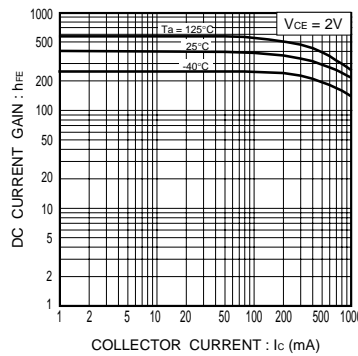


Fig.2 DC current gain vs. collector current

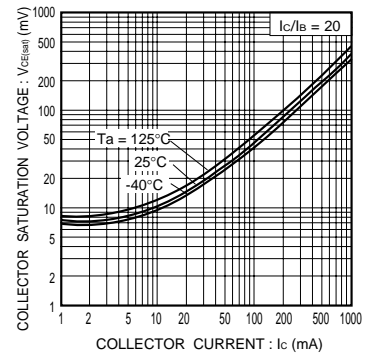


Fig.3 Collector-emitter saturation voltage vs. collector current ( I )

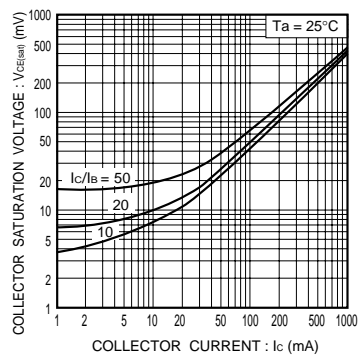


Fig.4 Collector-emitter saturation voltage vs. collector current ( II )

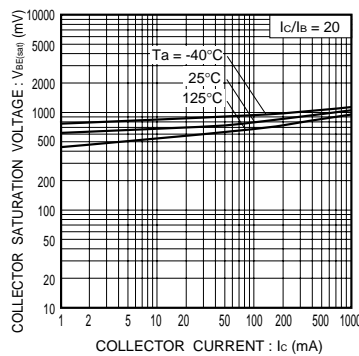


Fig.5 Base-emitter saturation voltage vs. collector current

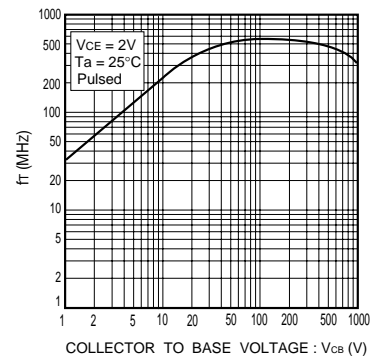


Fig.6 Collector output capacitance Emitter input capacitance vs. base voltage

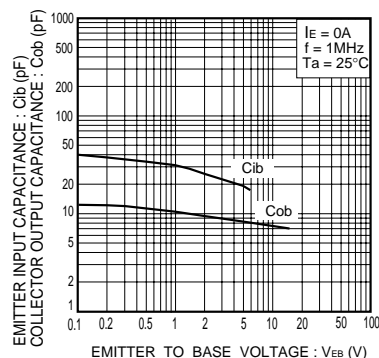


Fig.7 Collector output capacitance vs collector-base voltage Emitter input capacitance vs emitter-base voltage