Low Frequency Transistor (50V, 2A)

2SC5585

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

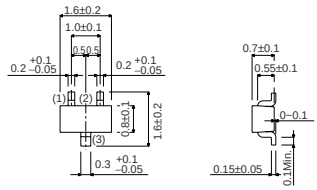
●Features

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

●Structure

For switching
For muting

●External dimensions (Units : mm)



ROHM : EMT3

(1) EMITTER
(2) BASE
(3) COLLECTOR

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit	
Collectot-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	Tj	150	°C	
Storage temperature	Tstg	−55~+150	°C	

* Single pulse Pw = 1ms

●Electrical characteristics (Ta = 25°C)

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

●Packaging specifications

Type	hFE	Package	Taping
		Code	TL
		Basic ordering unit (pieces)	3000
2SC5585			○

●Electrical characteristic curves

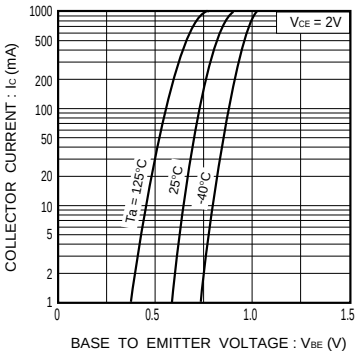


Fig.1 Grounded emitter propagation characteristics

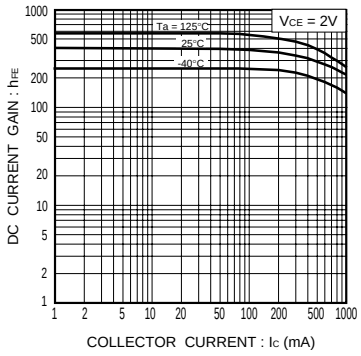


Fig.2 DC current gain vs. collector current

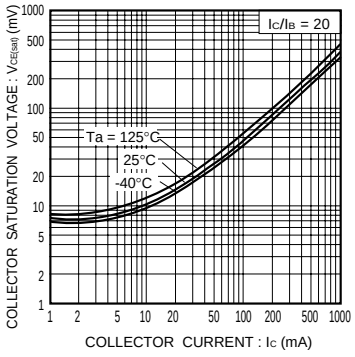


Fig.3 Collector-emitter saturation voltage vs. collector current (I)

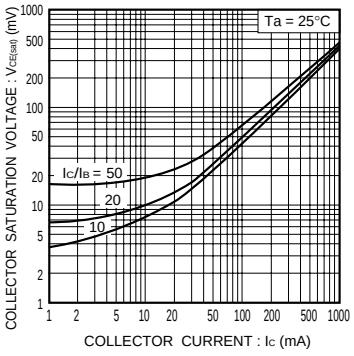


Fig.4 Collector-emitter saturation voltage vs. collector current (II)

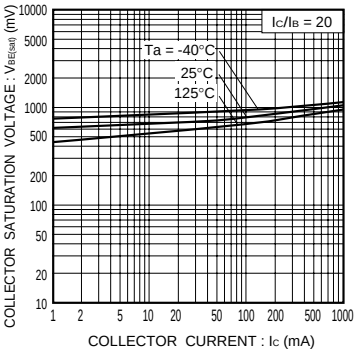


Fig.5 Base-emitter saturation voltage vs. collector current

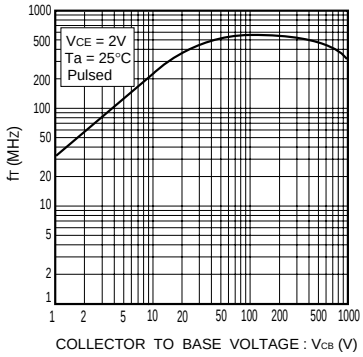


Fig.6 Collector output capacitance
Emitter input capacitance
vs. base voltage

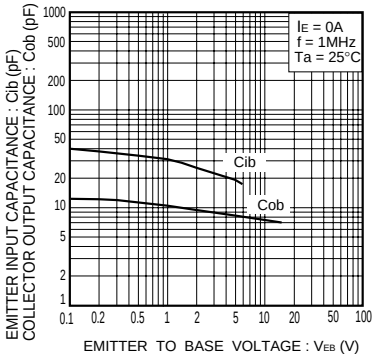


Fig.7 Collector output capacitance
vs collector-base voltage
Emitter input capacitance
vs emitter-base voltage