Ordering number:EN4802

NPN Epitaxial Planar Silicon Transistor

2SC5155

Low-Frequency General-Purpose Amplifier, Applications

Applications

· Various drivers.

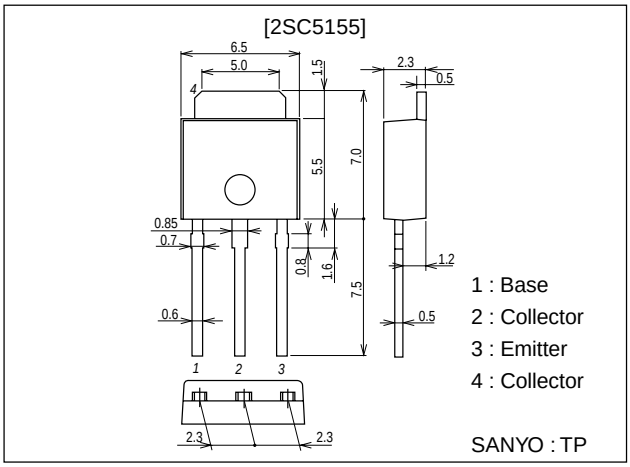
Features

· High current capacity.
· Adoption of MBIT process.
· High DC current gain.
· Low collector-to-emitter saturation voltage.
· High V_{EBO}.

Package Dimensions

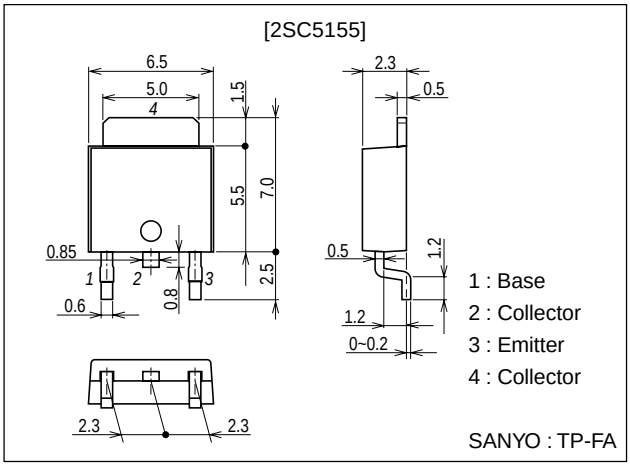
unit:mm

2045B



unit:mm

2044B



SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Specifications

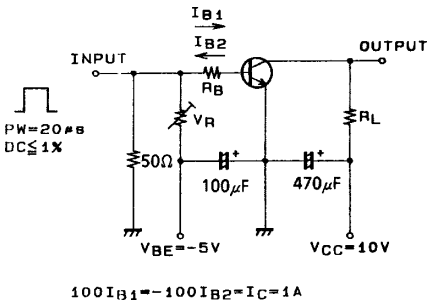
Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		50	V
Collector-to-Emitter Voltage	V_{CEO}		20	V
Emitter-to-Base Voltage	V_{EBO}		15	V
Collector Current	I_C		3	A
Collector Current (Pulse)	I_{CP}		6	A
Base Current	I_B		0.6	A
Collector Dissipation	P_C		1	W
		Tc=25˚C	20	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

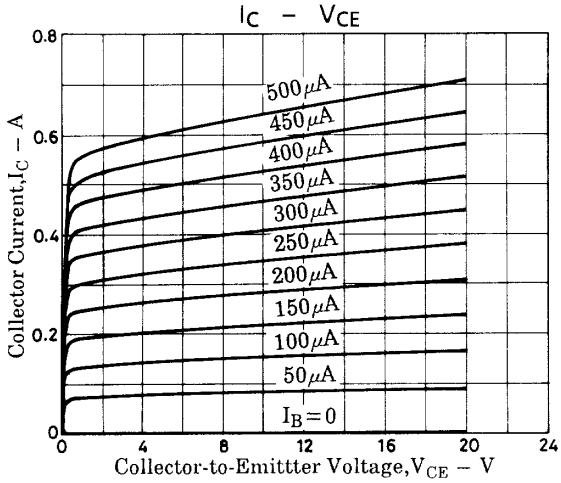
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=30V, I_E=0			100	nA
Emitter Cutoff Current	I_{EBO}	V_{EB}=10V, I_C=0			100	nA
DC Current Gain	$h_{FE}1$	V_{CE}=2V, I_C=500mA	800	1500	3200	
	$h_{FE}2$	V_{CE}=2V, I_C=2A	500			
Gain-Bandwidth Product	f_T	V_{CE}=2V, I_C=500mA		260		MHz
Output Capacitance	Cob	V_{CB}=10V, f=1MHz		35		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=2A, I_B=20mA		0.15	0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=2A, I_B=20mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=10μA, I_E=0	50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=1mA, R_{BE}=∞	20			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	15			V
Turn-ON Time	t_{on}	See specified Test Circuit		0.14		μs
Storage Time	t_{stg}	See specified Test Circuit		1.5		μs
Fall Time	t_f	See specified Test Circuit		0.12		μs

Switching Time Test Circuit

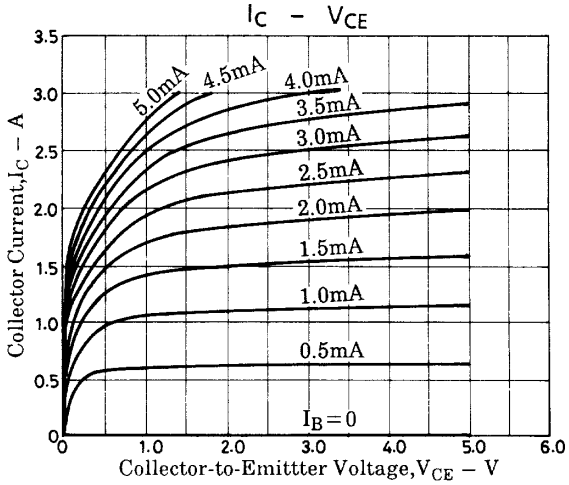


$100I_{B1}=-100I_{B2}=I_C=1A$

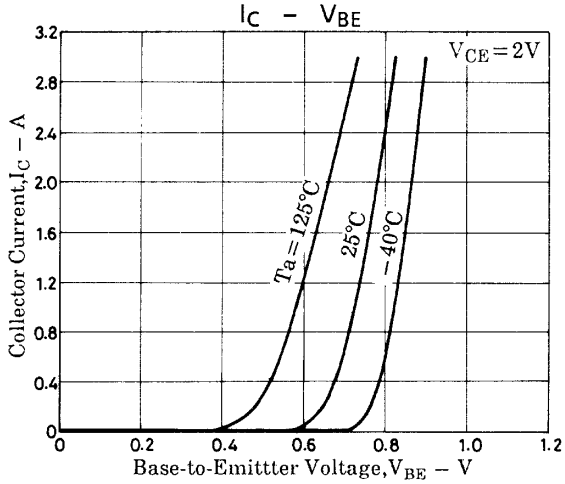
I_C – V_{CE}



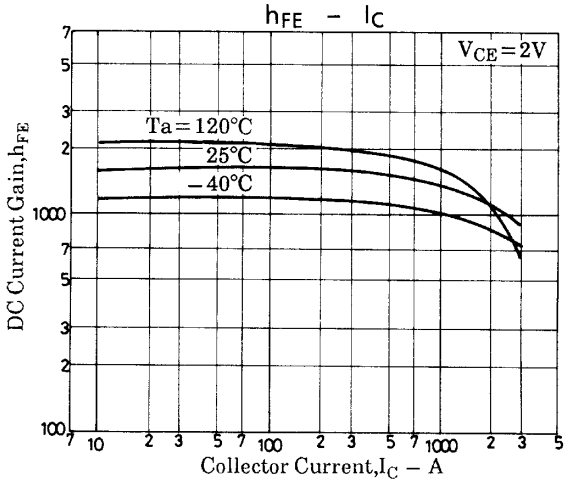
I_C – V_{CE}



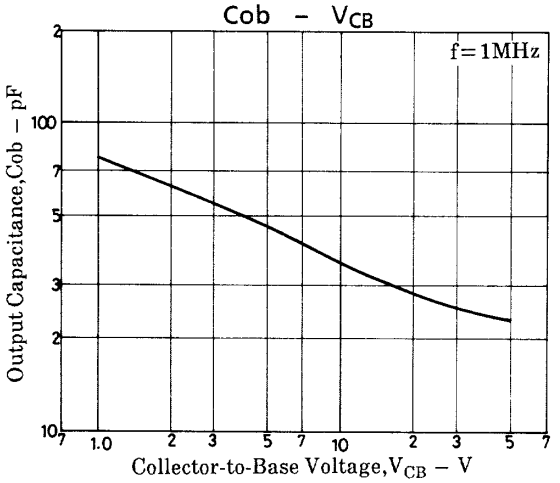
I_C – V_{BE}



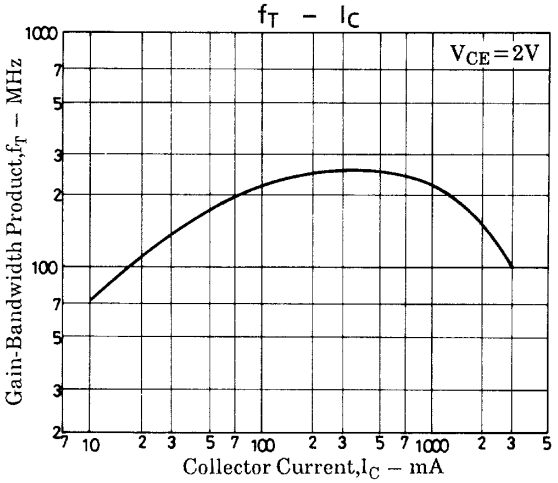
h_{FE} – I_C



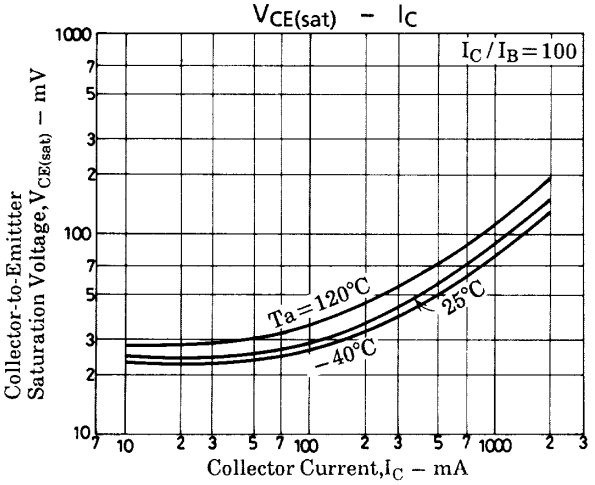
Cob – V_{CB}



f_T – I_C



$V_{CE(sat)}$ – I_C



$V_{BE(sat)}$ – I_C