

**2SC5155**

## Low-Frequency General-Purpose Amplifier, Applications

### Applications

- Various drivers.

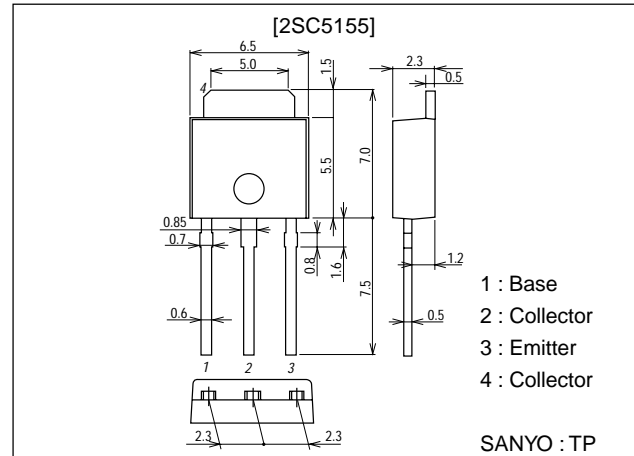
### Features

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

### Package Dimensions

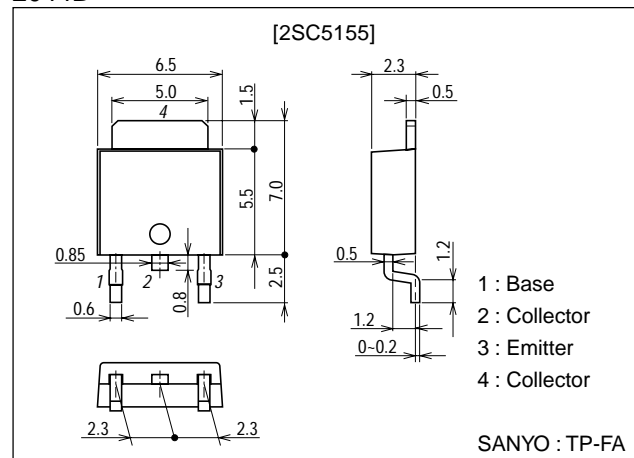
unit:mm

2045B



unit:mm

2044B



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## Specifications

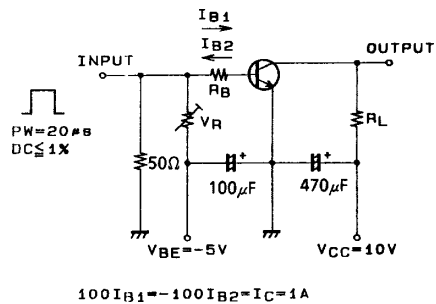
### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		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
		$T_c=25^\circ\text{C}$	20	W
Junction Temperature	$T_J$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

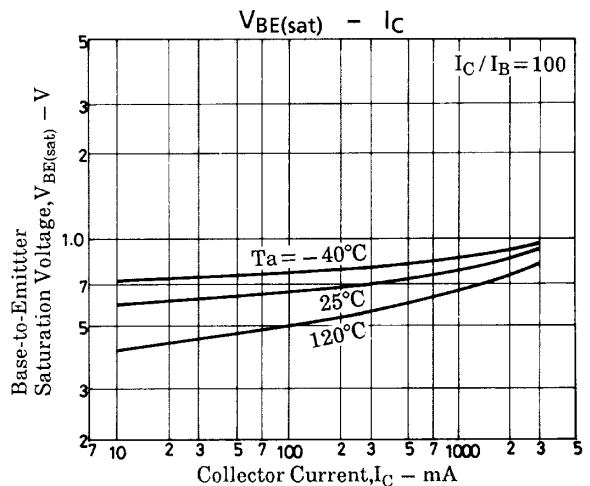
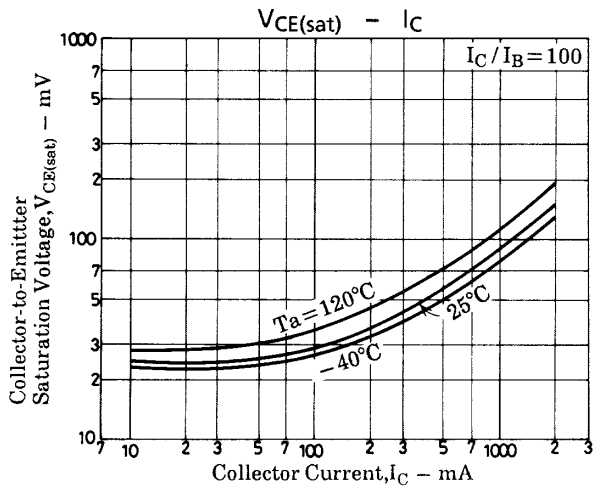
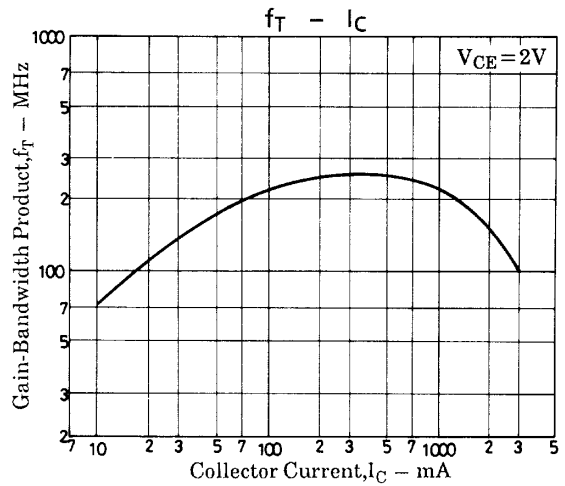
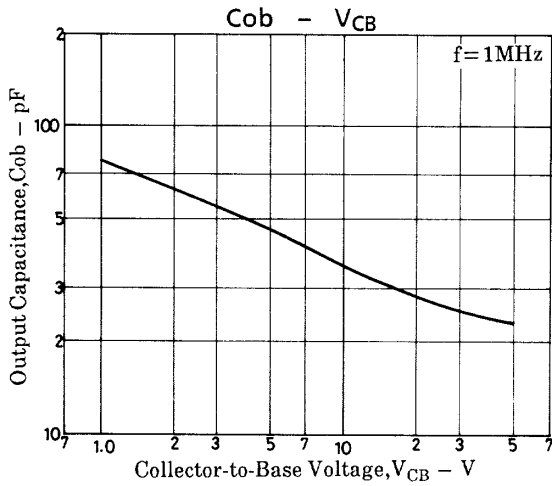
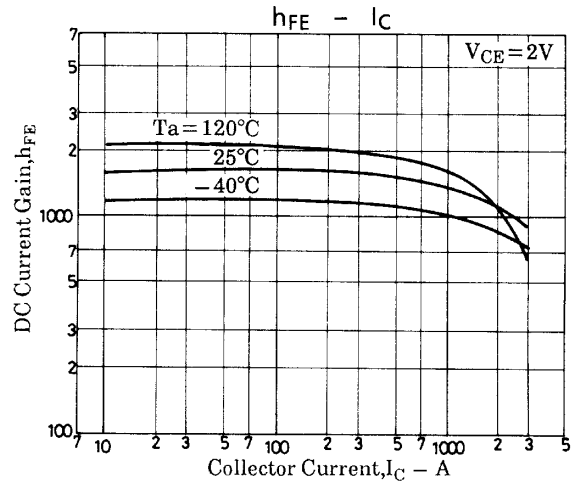
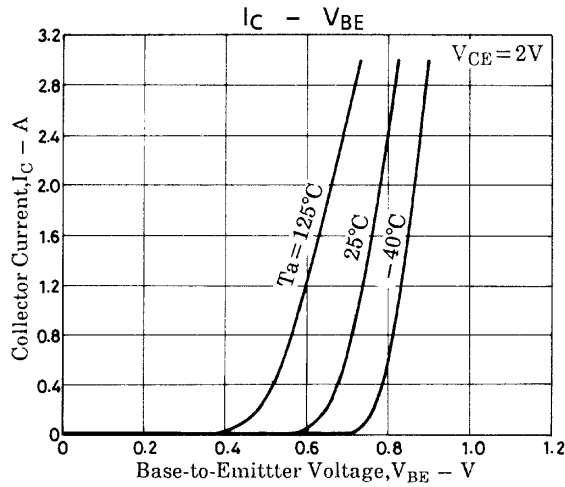
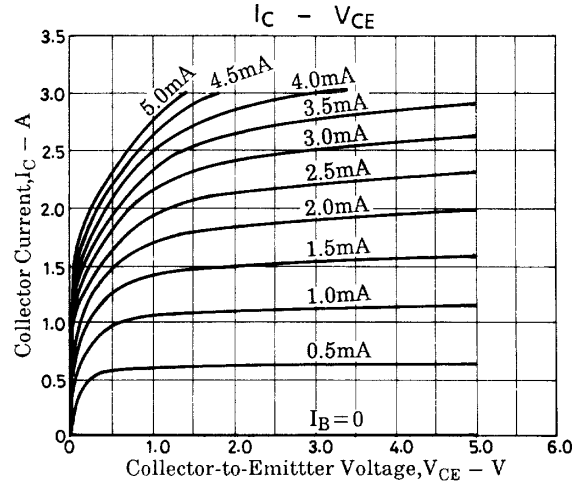
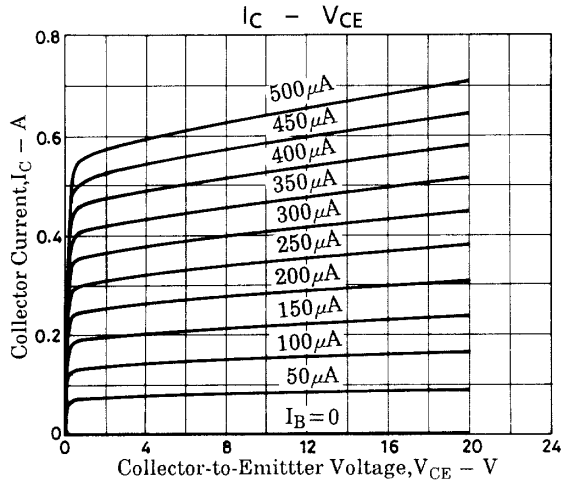
### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=30\text{V}, I_E=0$			100	nA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=10\text{V}, I_C=0$			100	nA
DC Current Gain	$h_{FE1}$	$V_{CE}=2\text{V}, I_C=500\text{mA}$	800	1500	3200	
	$h_{FE2}$	$V_{CE}=2\text{V}, I_C=2\text{A}$	500			
Gain-Bandwidth Product	$f_T$	$V_{CE}=2\text{V}, I_C=500\text{mA}$		260		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, f=1\text{MHz}$		35		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2\text{A}, I_B=20\text{mA}$		0.15	0.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=2\text{A}, I_B=20\text{mA}$		0.85	1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	50			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, R_{BE}=\infty$	20			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	15			V
Turn-ON Time	$t_{on}$	See specified Test Circuit		0.14		$\mu\text{s}$
Storage Time	$t_{stg}$	See specified Test Circuit		1.5		$\mu\text{s}$
Fall Time	$t_f$	See specified Test Circuit		0.12		$\mu\text{s}$

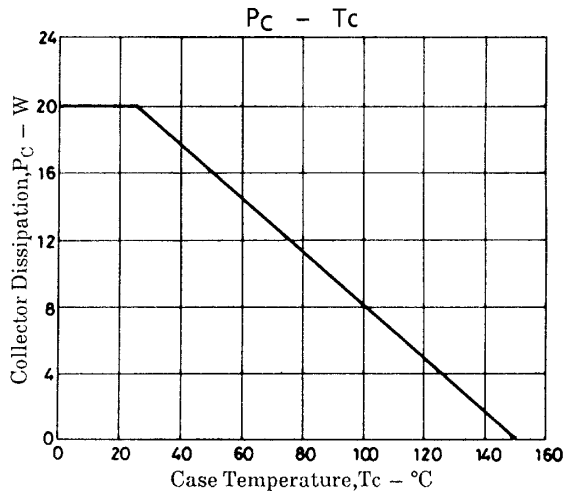
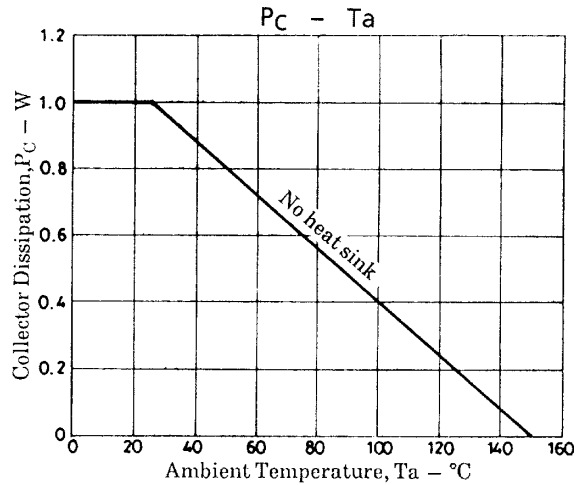
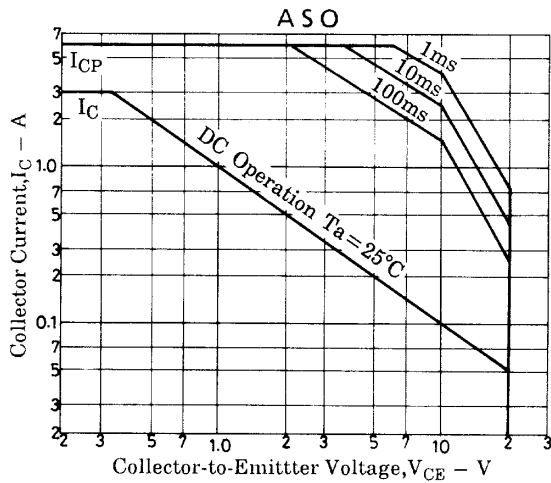
### Switching Time Test Circuit



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