



# 2SC5155

## Low-Frequency General-Purpose Amplifier, Applications

### Applications

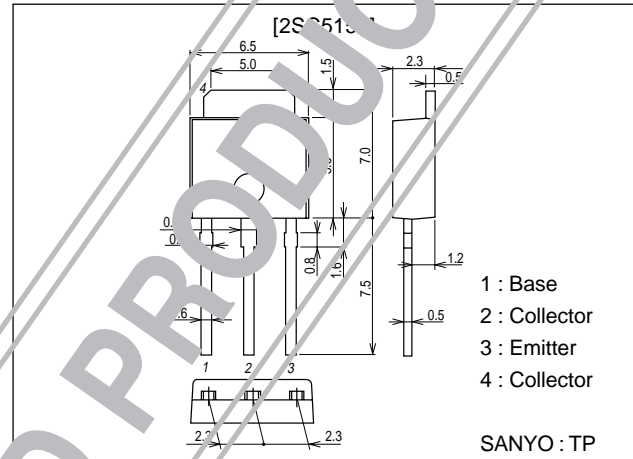
- Various drivers.

### Features

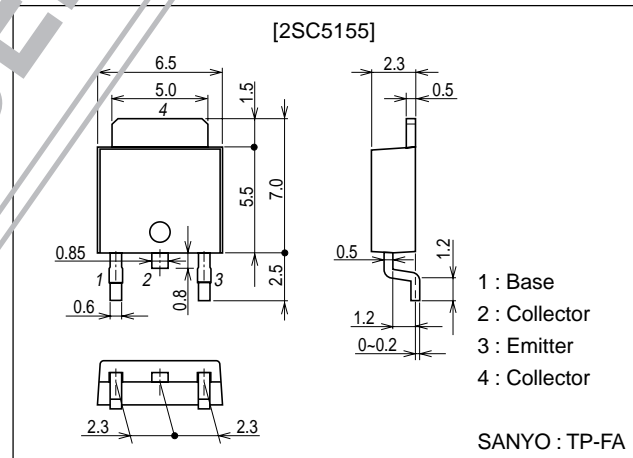
- High current capacity.
- Adoption of MBIT process.
- High DC current gain.
- Low collector-to-emitter saturation voltage.
- High  $V_{EBO}$ .

### Package Dimensions

unit:mm  
2045B



unit:mm  
2045B



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**Specifications**

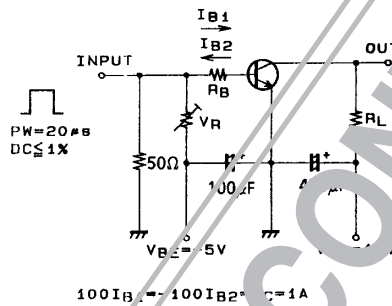
**Absolute Maximum Ratings** at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>		50	V
Collector-to-Emitter Voltage	V <sub>CEO</sub>		20	V
Emitter-to-Base Voltage	V <sub>EBO</sub>		15	V
Collector Current	I <sub>C</sub>		3	A
Collector Current (Pulse)	I <sub>CP</sub>		6	A
Base Current	I <sub>B</sub>		0.6	A
Collector Dissipation	P <sub>C</sub>		1	W
		T <sub>c</sub> =25°C	20	W
Junction Temperature	T <sub>J</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

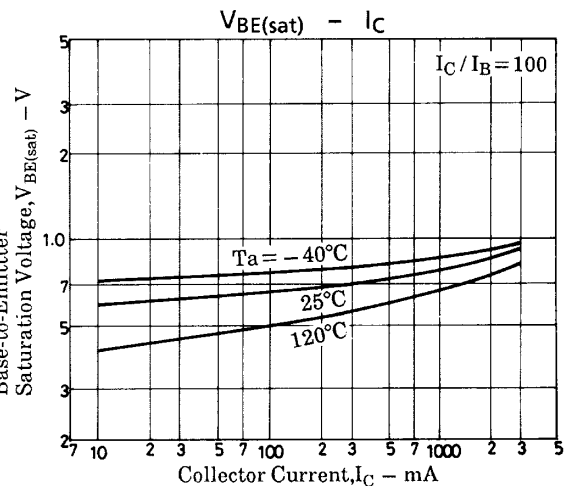
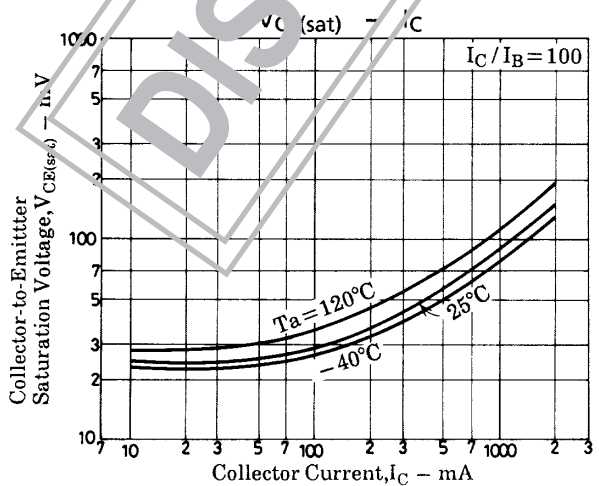
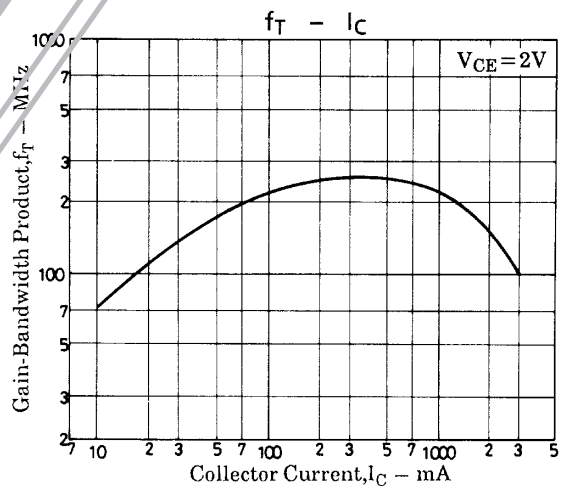
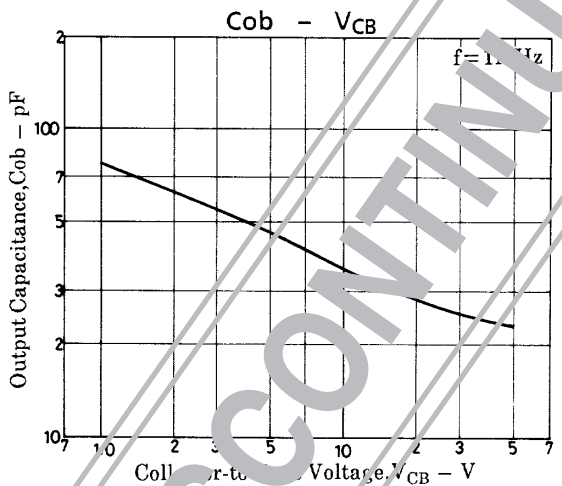
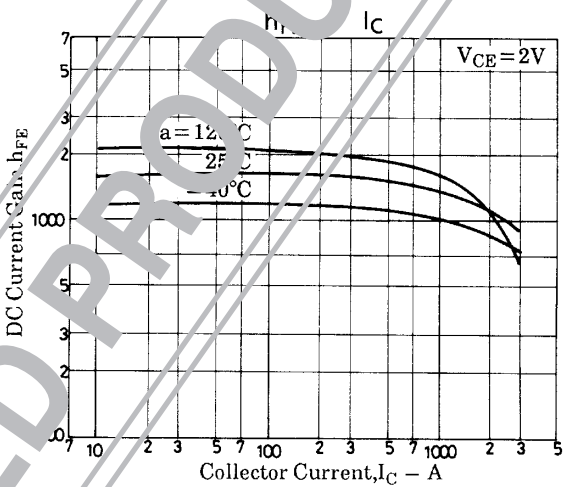
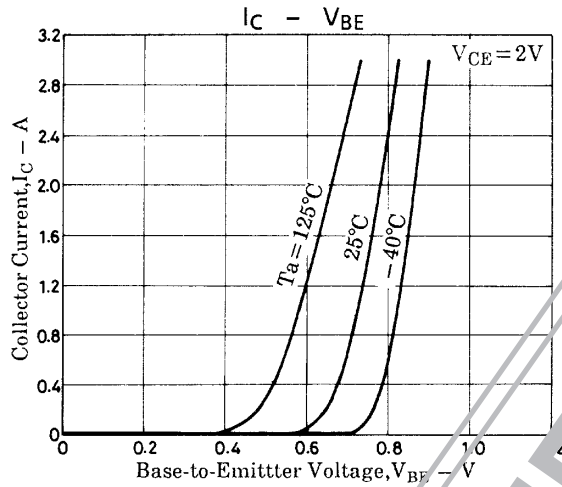
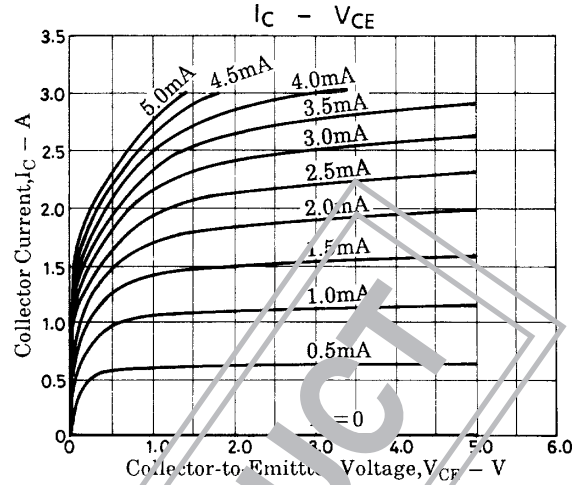
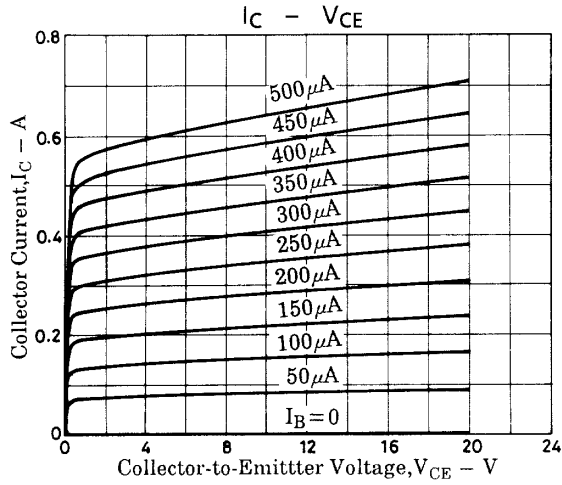
**Electrical Characteristics** at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =30V, I <sub>E</sub> =0			100	nA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =10V, I <sub>C</sub> =0			100	nA
DC Current Gain	h <sub>FE1</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA	800	1500	3200	
	h <sub>FE2</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =2A	500			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA		260		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, f=1MHz		35		pF
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =2A, I <sub>B</sub> =20mA		0.15	0.5	V
Base-to-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =2A, I <sub>B</sub> =20mA		0.85	1.2	V
Collector-to-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10μA, I <sub>E</sub> =0	50			V
Collector-to-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA, R <sub>th(j-c)</sub> =∞	20			V
Emitter-to-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0	15			V
Turn-ON Time	t <sub>on</sub>	See specified Test Circuit		0.14		μs
Storage Time	t <sub>stg</sub>	See specified Test Circuit		1.5		μs
Fall Time	t <sub>f</sub>	See specified Test Circuit		0.12		μs

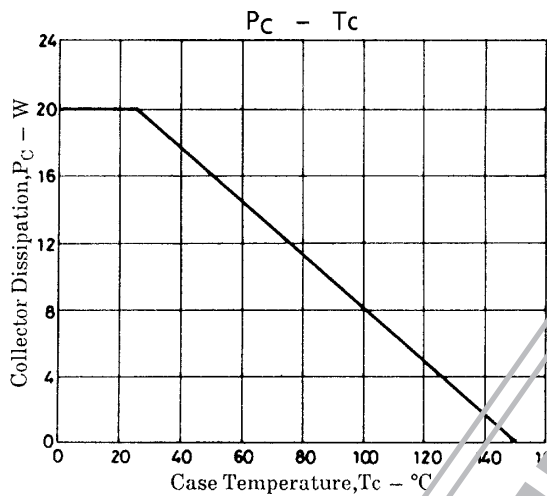
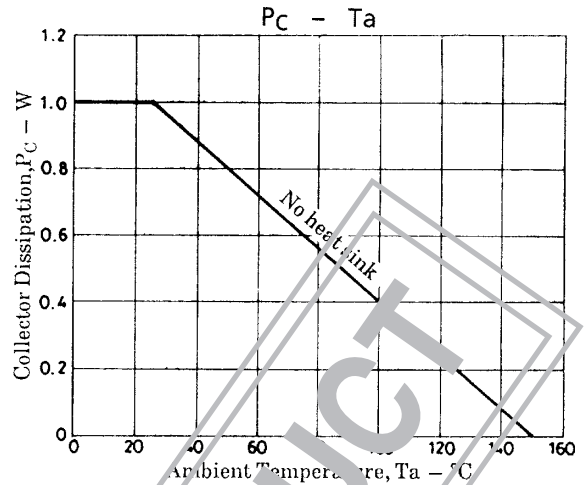
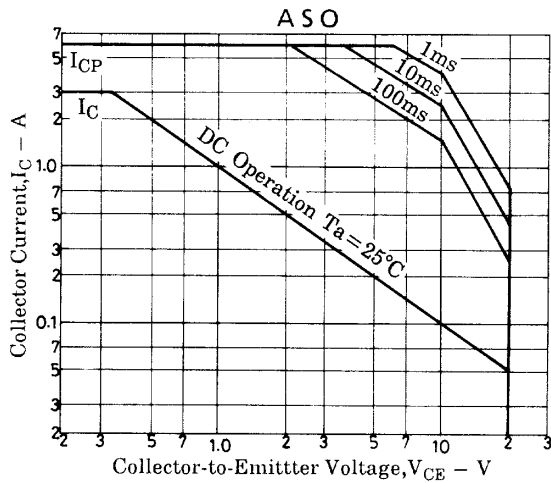
**Switching Time Test Circuit**



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