

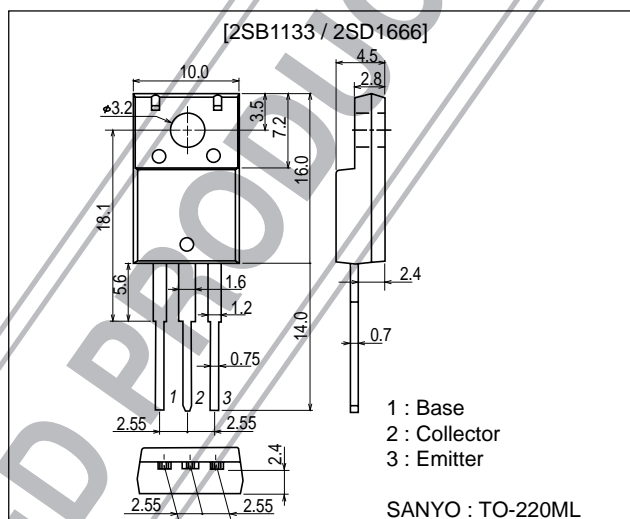
**SANYO****2SB1133 / 2SD1666****Low-Frequency  
General-Purpose Amplifier Applications****Features**

- Wide ASO(Adoption of MBIT process).
- Micaless package facilitating easy mounting.
- High reliability.

**Package Dimensions**

unit : mm

2041A

**Specifications**

( ) : 2SB1133

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>		(-)-60	V
Collector-to-Emitter Voltage	V <sub>CE0</sub>		(-)-60	V
Emitter-to-Base Voltage	V <sub>EB0</sub>		(-)-6	V
Collector Current	I <sub>C</sub>		(-)-3	A
Collector Current (Pulse)	I <sub>CP</sub>		(-)-8	A
Collector Dissipation	P <sub>C</sub>	T <sub>C</sub> =25°C	2	W
Junction Temperature	T <sub>J</sub>		25	W
Storage Temperature	T <sub>stg</sub>		150	°C
			-40 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> =(-)40V, I <sub>E</sub> =0			(-)-100	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =(-)4V, I <sub>C</sub> =0			(-)-100	μA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)0.5A	*70		*280	
	h <sub>FE</sub> (2)	V <sub>CE</sub> =(-)5V, I <sub>C</sub> =(-)3A	20			

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\*: The 2SB1133 / 2SD1666 are classified by 0.5A h<sub>FE</sub> as follows :

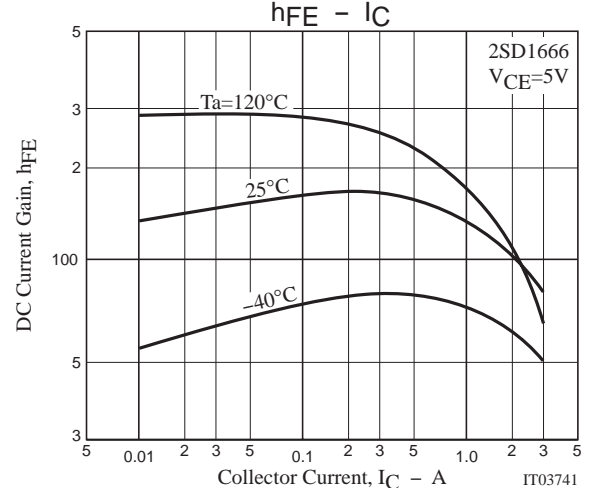
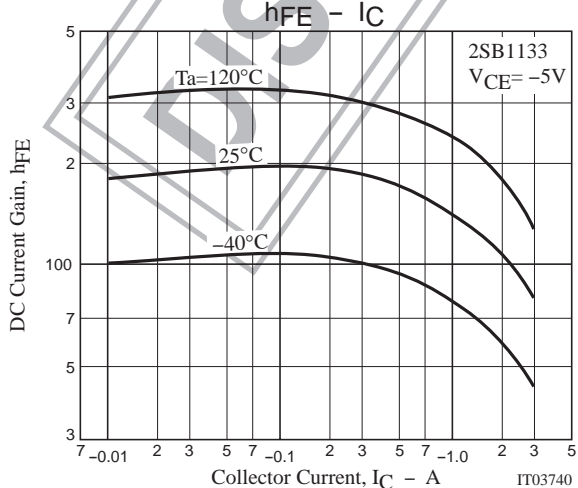
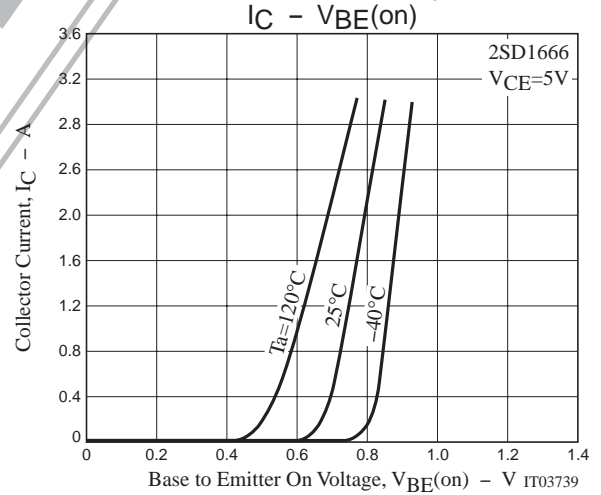
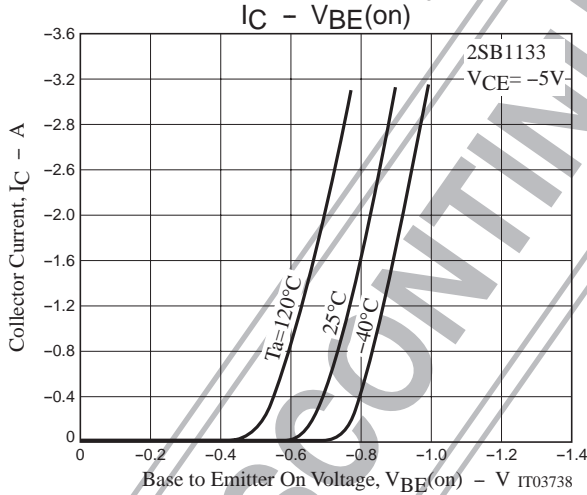
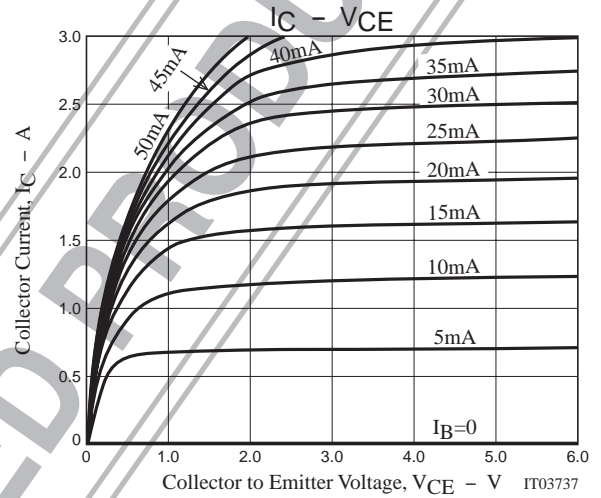
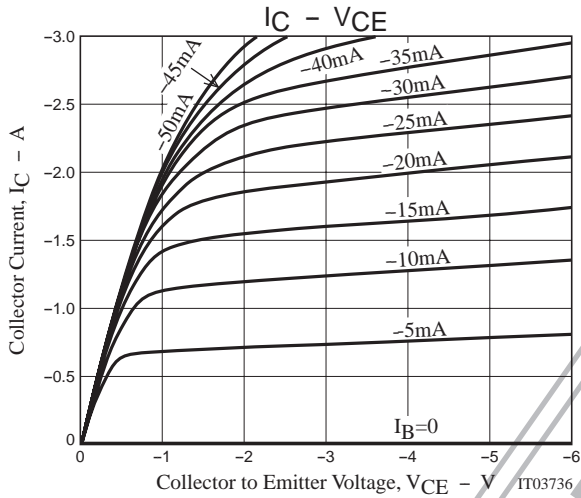
Rank	Q	R	S
h <sub>FE</sub>	70 to 140	100 to 200	140 to 280

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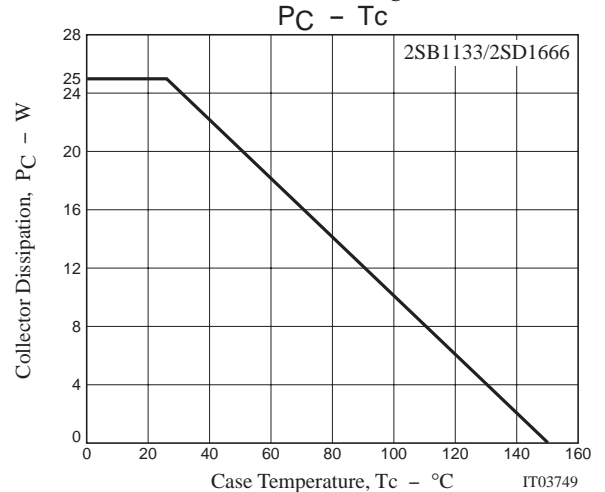
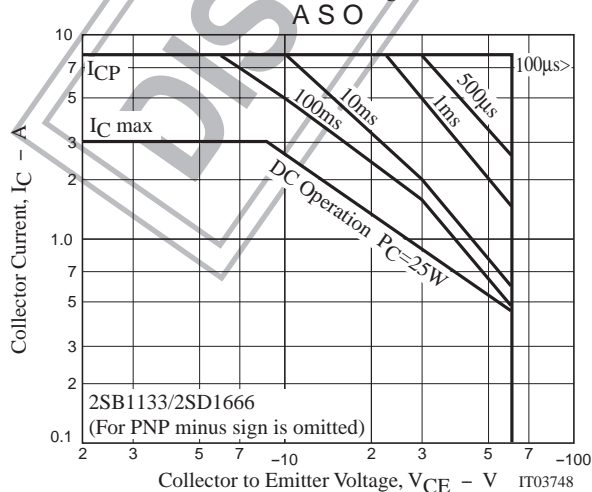
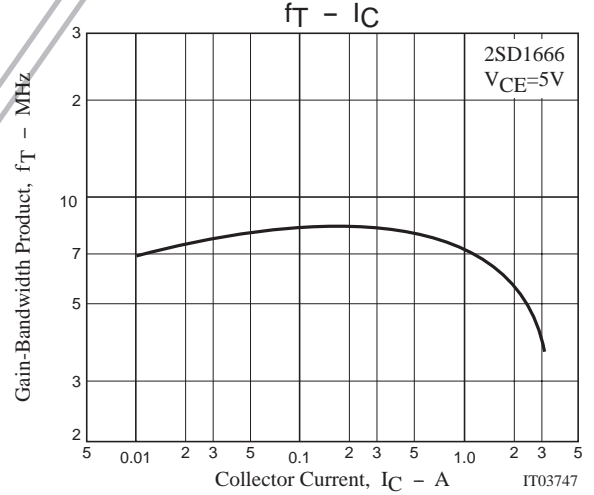
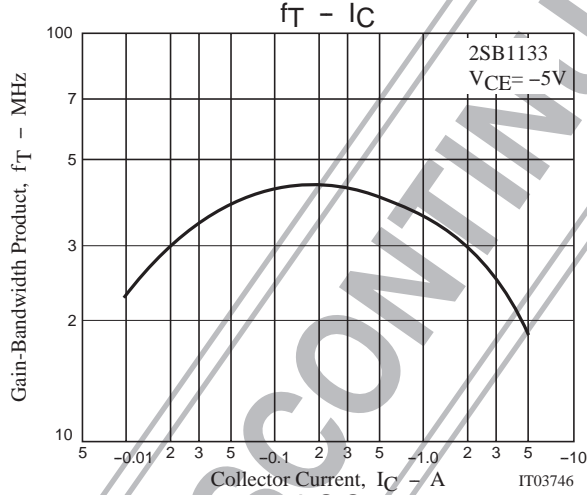
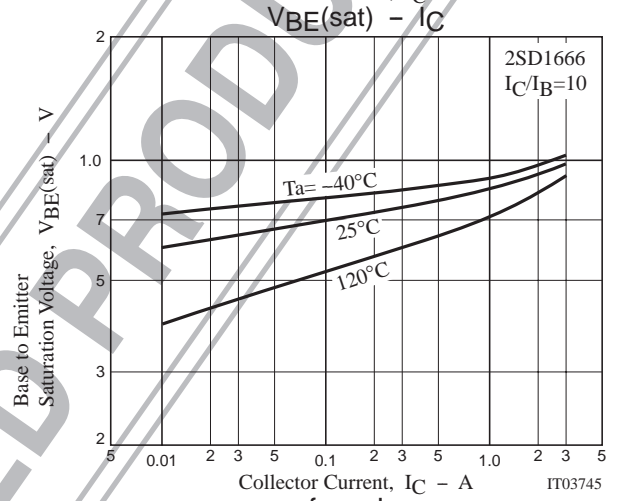
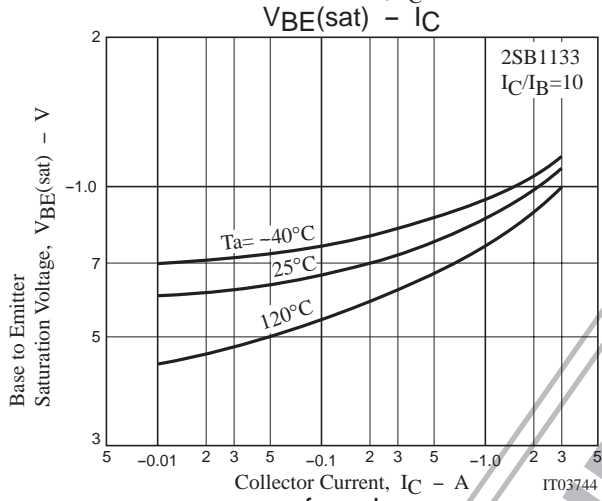
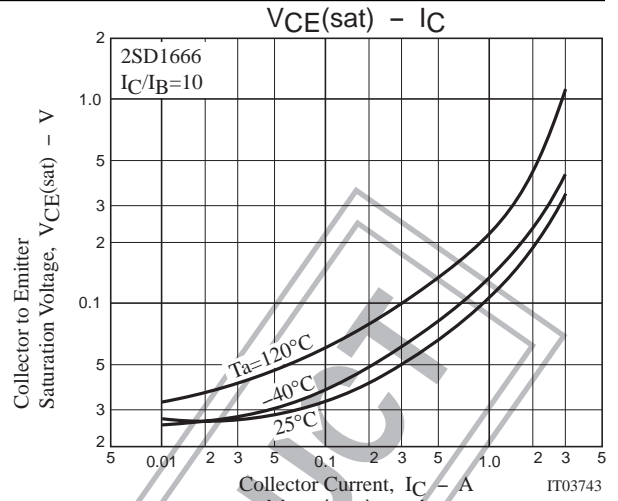
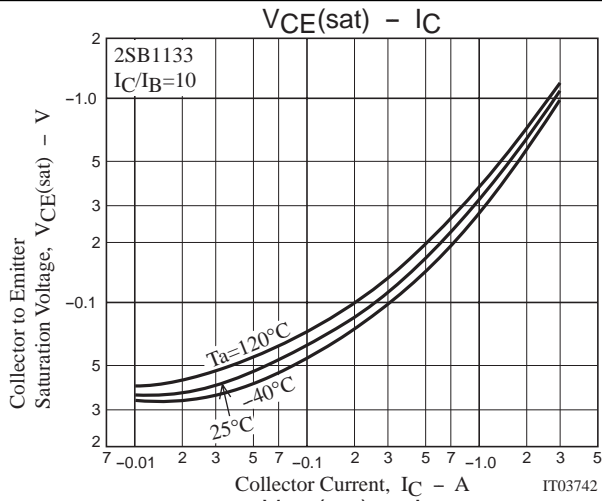
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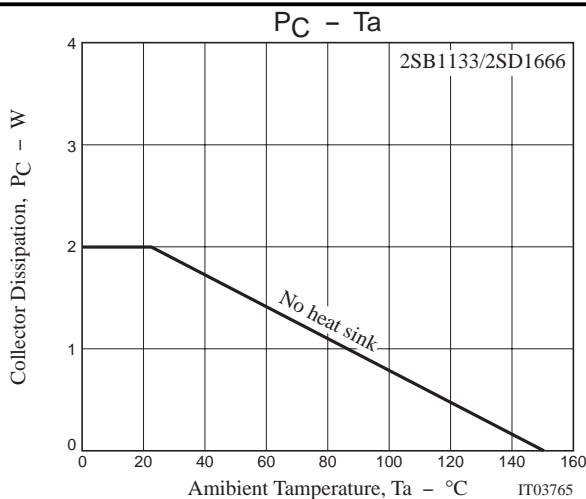
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain-Bandwidth Product	$f_T$	$V_{CE}=(-)5V, I_C=(-)0.5A$		(40)8		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=(-)10V, f=1MHz$		(110)60		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)2A, I_B=(-)0.2A$		(-)0.6	(-)1	V
Base-to-Emitter Saturation Voltage	$V_{BE}$	$V_{CE}=(-)5V, I_C=(-)0.5A$		(-)0.7	(-)1	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)1mA, I_E=0$	(-)60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)5mA, R_{BE}=\infty$	(-)60			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)1mA, I_C=0$	(-)6			V



# 2SB1133 / 2SD1666





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