



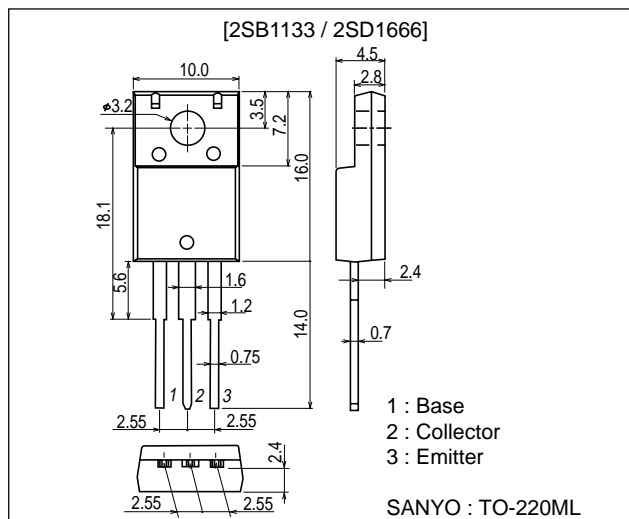
Low-Frequency General-Purpose Amplifier Applications

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 _{CB0}		(-)60	V
Collector-to-Emitter Voltage	V _{CE0}		(-)60	V
Emitter-to-Base Voltage	V _{EB0}		(-)6	V
Collector Current	I _C		(-)3	A
Collector Current (Pulse)	I _{CP}		(-)8	A
Collector Dissipation	P _C		2	W
		T _c =25°C	25	W
Junction Temperature	T _j		150	°C
Storage Temperature	T _{stg}		-40 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I _{CB0}	V _{CB} =(-)40V, I _E =0			(-)100	μA
Emitter Cutoff Current	I _{EB0}	V _{EB} =(-)4V, I _C =0			(-)100	μA
DC Current Gain	h _{FE} (1)	V _{CE} =(-)5V, I _C =(-)0.5A	*70		*280	
	h _{FE} (2)	V _{CE} =(-)5V, I _C =(-)3A	20			

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* : The 2SB1133 / 2SD1666 are classified by 0.5A h_{FE} as follows :

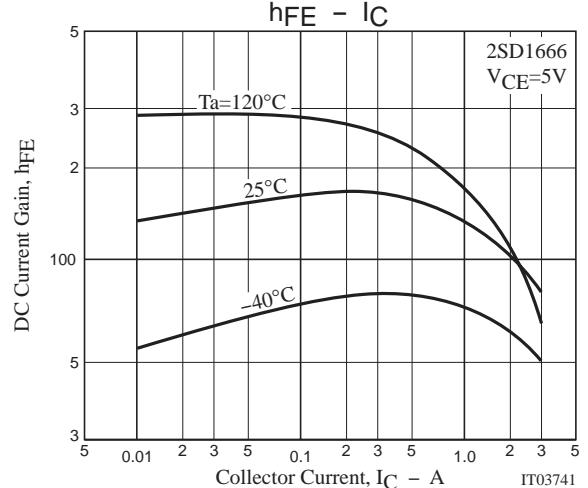
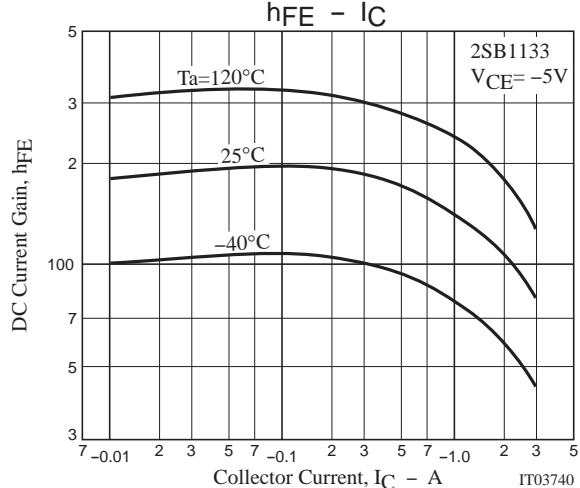
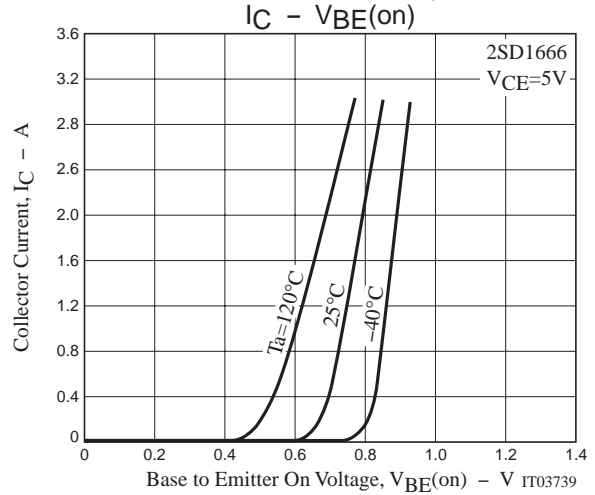
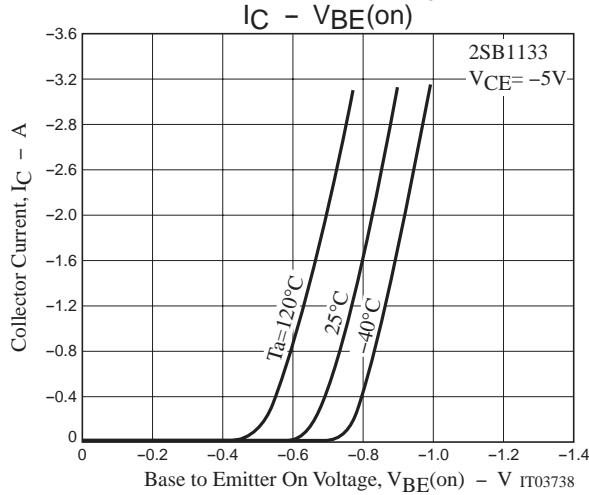
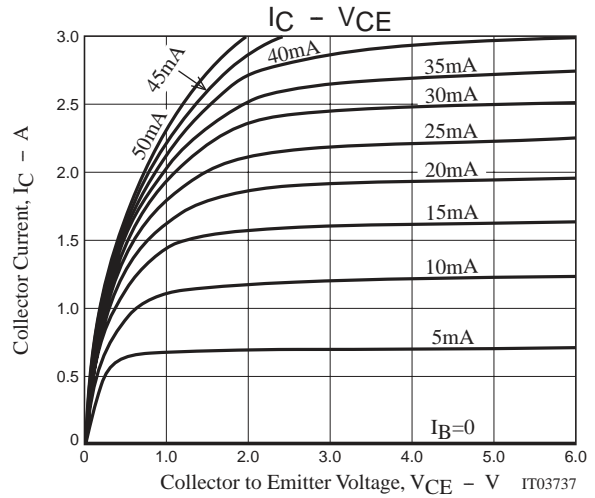
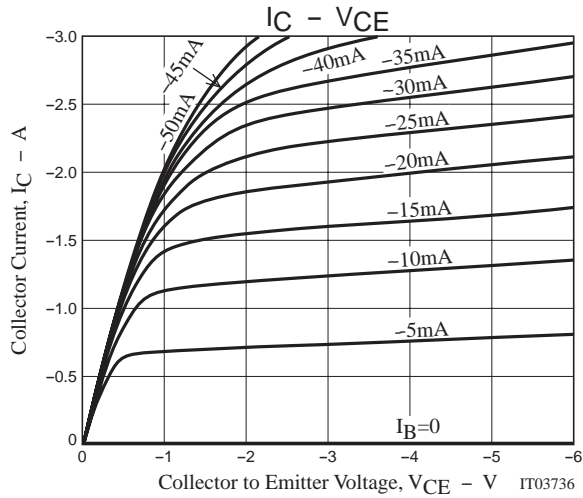
Rank	Q	R	S
h _{FE}	70 to 140	100 to 200	140 to 280

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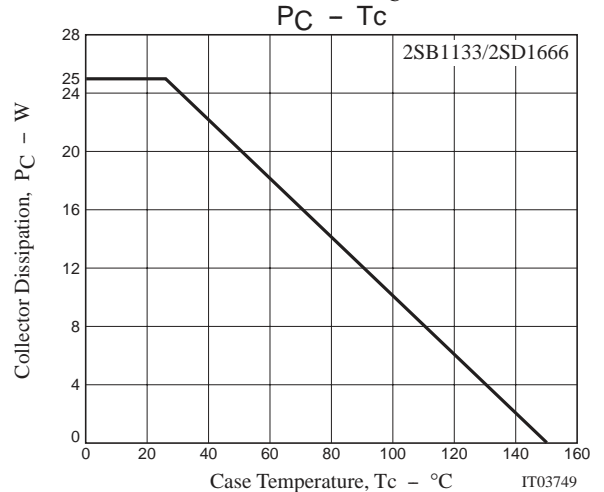
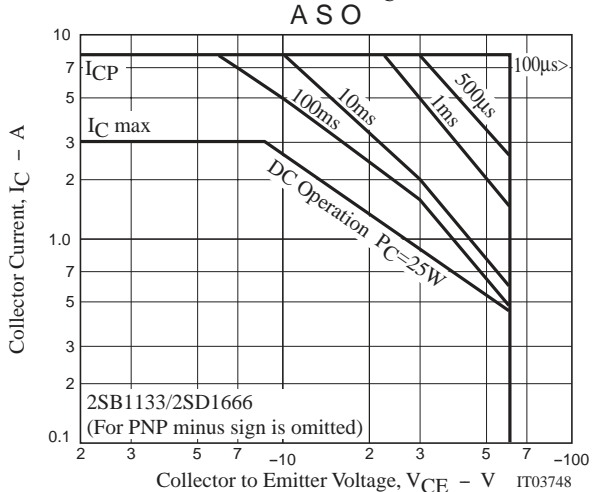
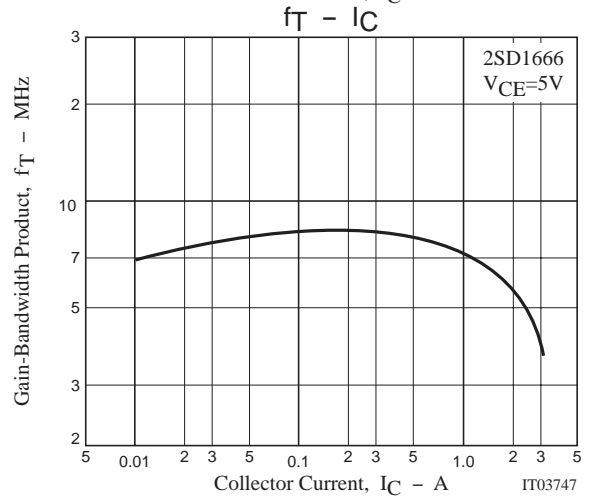
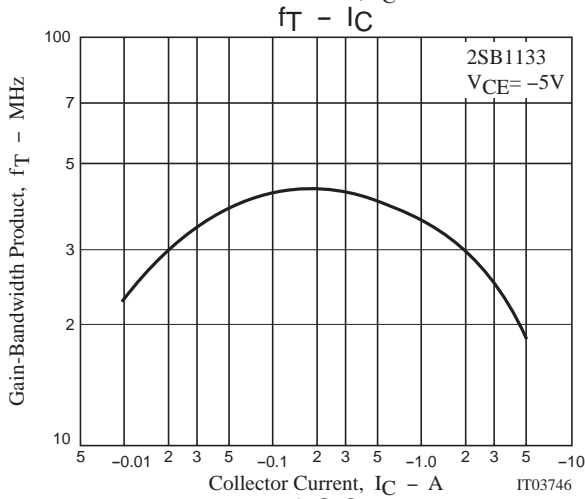
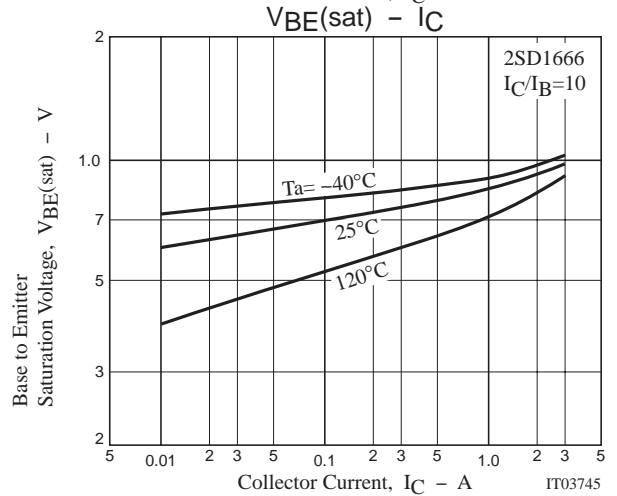
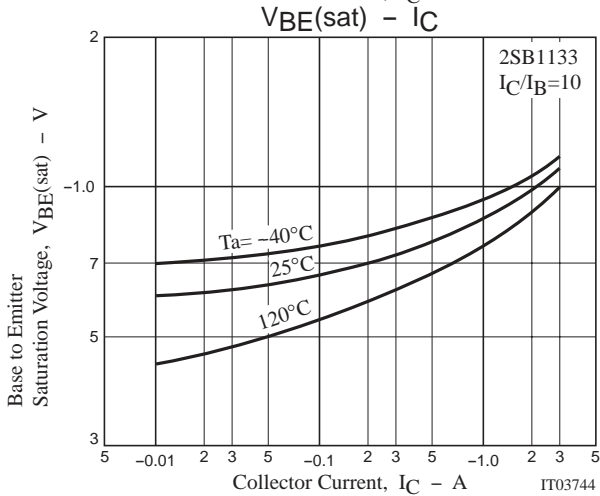
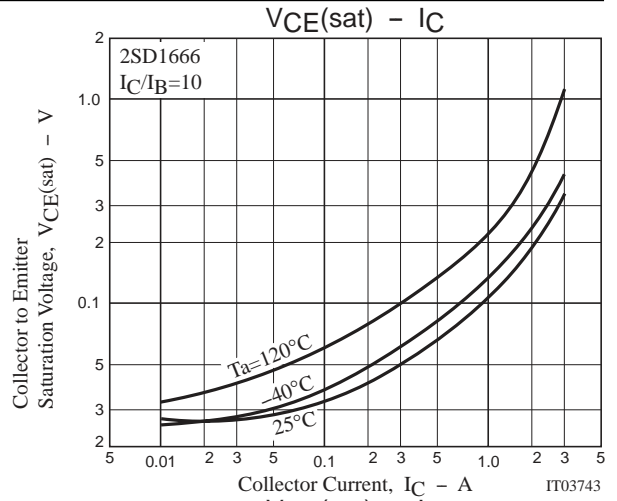
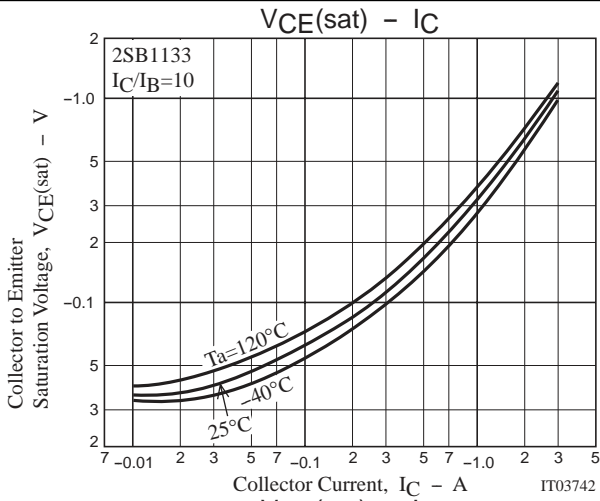
2SB1133 / 2SD1666

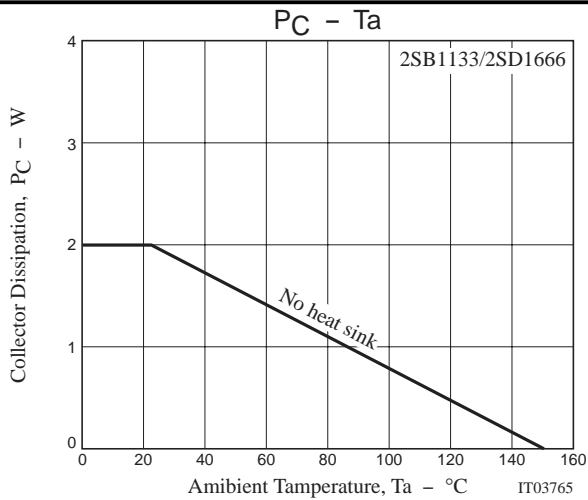
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gain-Bandwidth Product	f_T	$V_{CE}=(-)5V, I_C=(-)0.5A$		(40)8		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(110)60		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)2A, I_B=(-)0.2A$		(-)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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