



2SA1753/2SC4577

Low-Frequency General-Purpose Amplifier Applications

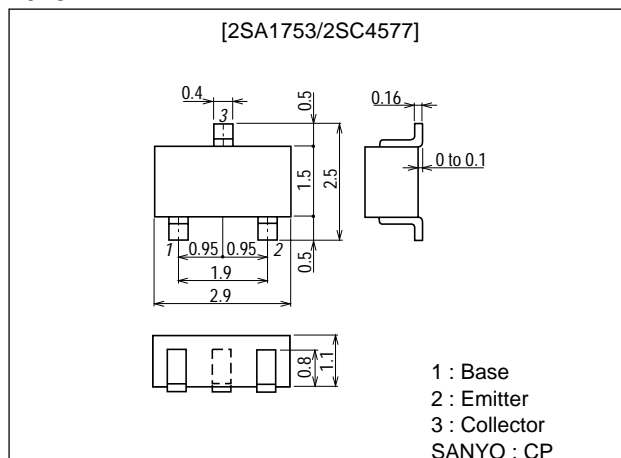
Features

- Small-sized package permitting the 2SA1753/2SC4577-applied sets to be made small and slim.
- Low collector-to-emitter saturation voltage.

Package Dimensions

unit:mm

2018B



() : 2SA1753

Specifications

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CB0}		(-)20	V
Collector-to-Emitter Voltage	V_{CEO}		(-)15	V
Emitter-to-Base Voltage	V_{EBO}		(-)5	V
Collector Current	I_C		(-)500	mA
Collector Current (Pulse)	I_{CP}		(-)1	A
Collector Dissipation	P_C		200	mW
Junction Temperature	T_j		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB}=(-)15\text{V}, I_E=0$			(-)0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)4\text{V}, I_C=0$			(-)0.1	μA

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Continued from preceding page.

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
DC Current Gain	h_{FE1}	$V_{CE}=(-)2V, I_C=(-)10mA$	135*		600*	
	h_{FE2}	$V_{CE}=(-)2V, I_C=(-)400mA$	(70)80			
Gain-Bandwidth Product	f_T	$V_{CE}=(-)2V, I_C=(-)50mA$		300 (400)		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)10V, f=1MHz$		(6.5)		pF
				4.0		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)1}$	$I_C=(-)5mA, I_B=(-)0.5mA$		(-)15	(-35)	mV
					30	mV
	$V_{CE(sat)2}$	$I_C=(-)200mA, I_B=(-)10mA$		160	300	mV
				(-200)	(-360)	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)200mA, I_B=(-)10mA$		(-)0.95	(-)1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)10\mu A, I_E=0$	(-)20			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)10\mu A, I_C=0$	(-)5			V

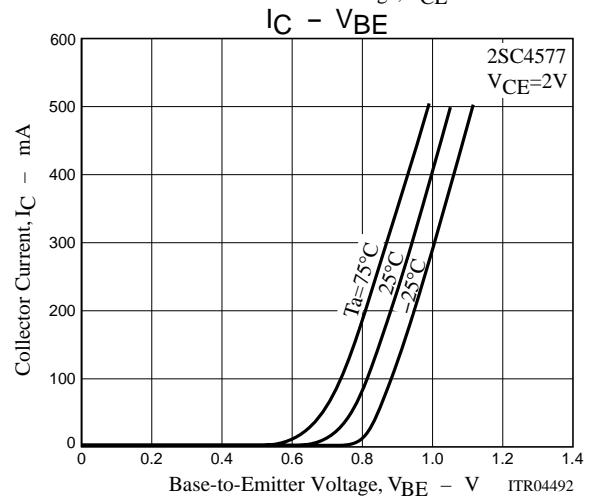
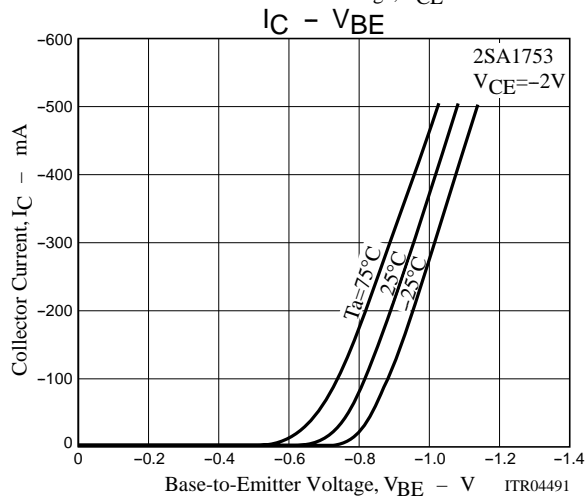
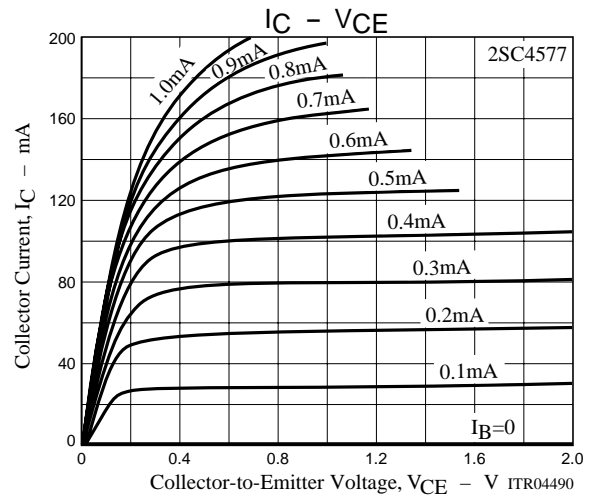
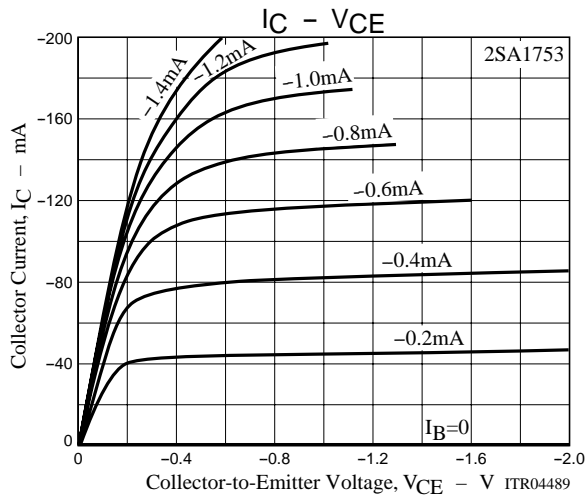
* : The 2SA1753/2SC4577 are classified by 10mA h_{FE} as follows :

Rank	5	6	7
h_{FE}	135 to 270	200 to 400	300 to 600

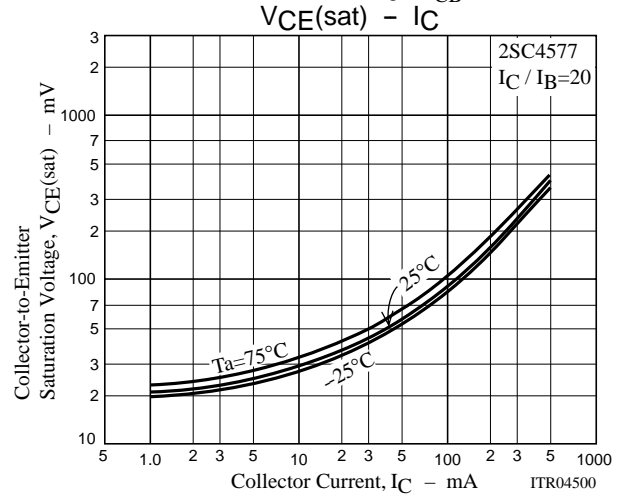
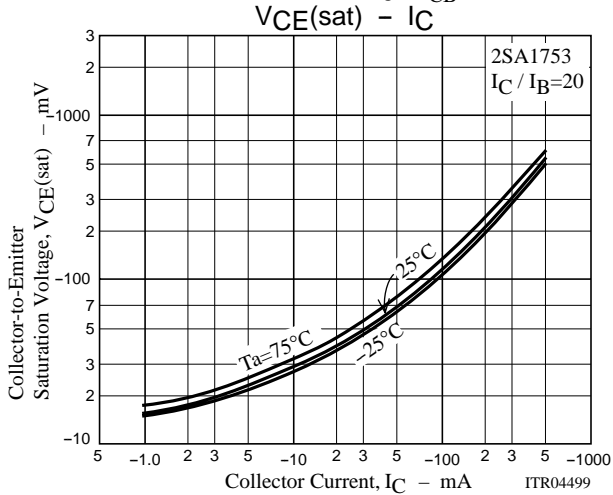
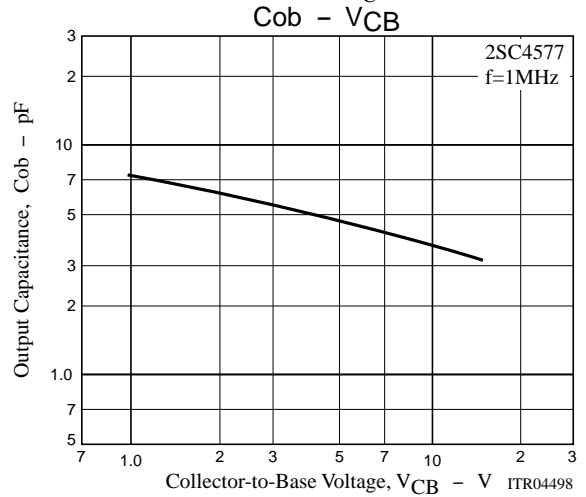
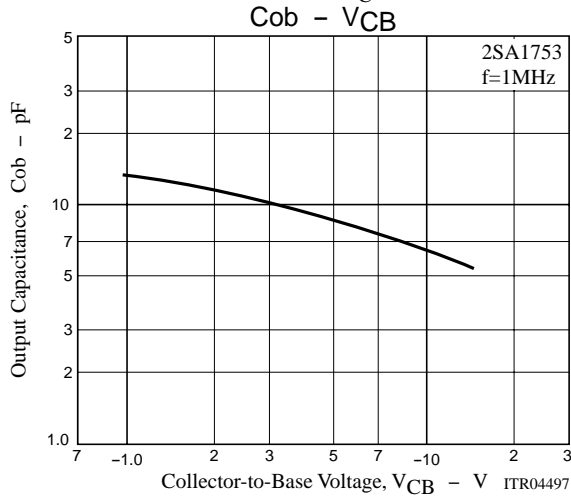
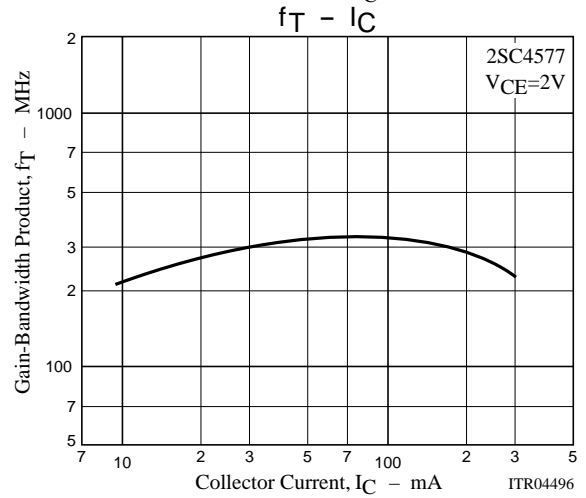
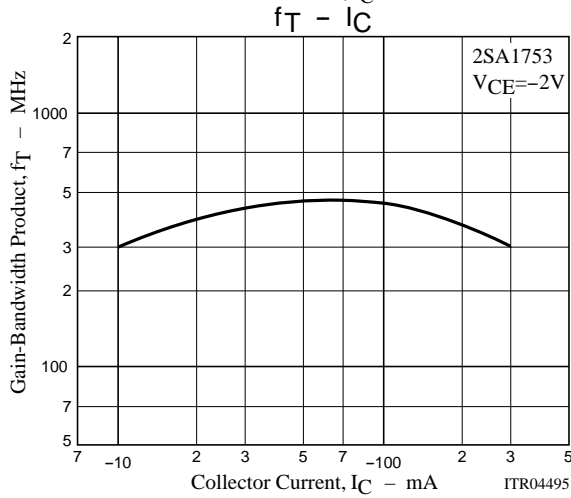
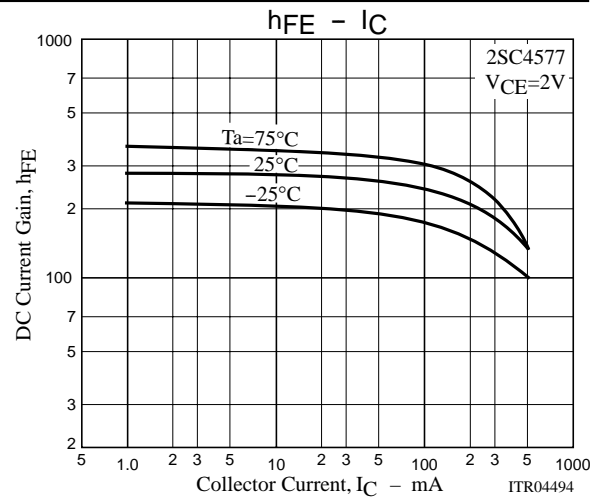
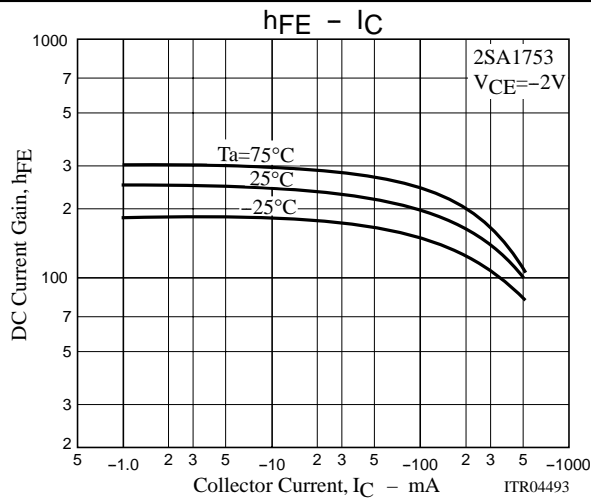
Marking 2SA1753 : ES

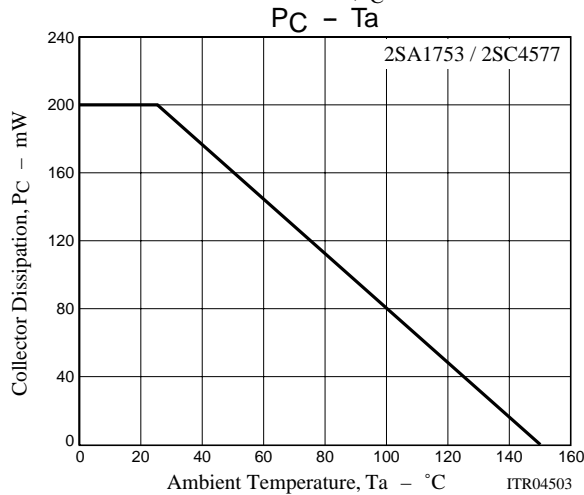
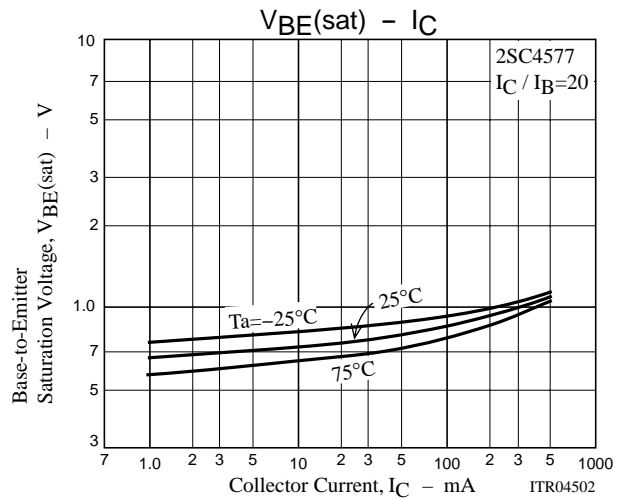
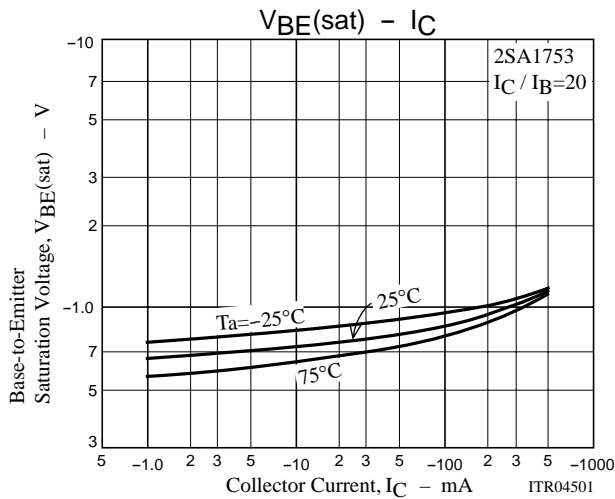
2SC4577 : UT

h_{FE} rank : 5, 6, 7



2SA1753/2SC4577





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