



## 2SA1753/2SC4577

### Low-Frequency General-Purpose Amplifier Applications

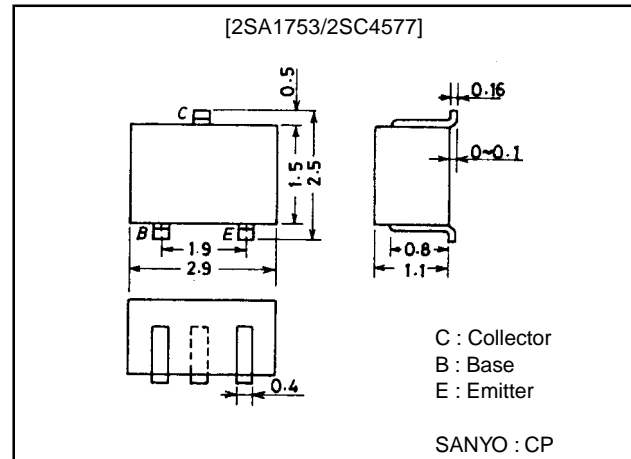
#### Features

- 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

2018A



() : 2SA1753

#### Specifications

##### Absolute Maximum Ratings at Ta = 25°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	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = (-)15V, I_E = 0$			(-)0.1	μA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	μA
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		MHz
				(400)		MHz
Output Capacitance	$C_{ob}$	$V_{CB} = (-)10V, f = 1MHz$		(6.5)		pF
				4.0		pF

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# 2SA1753/2SC4577

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
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
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

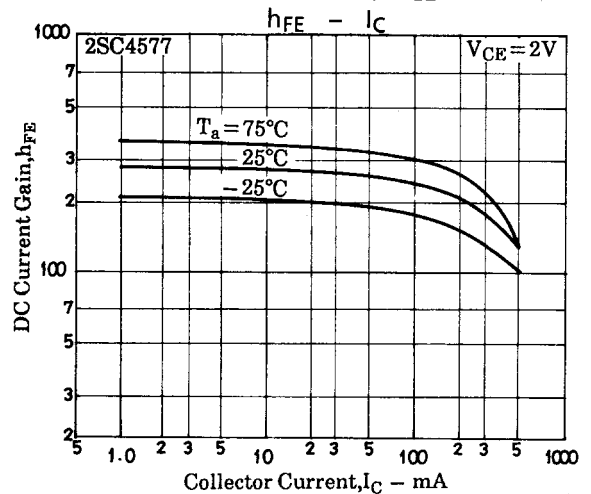
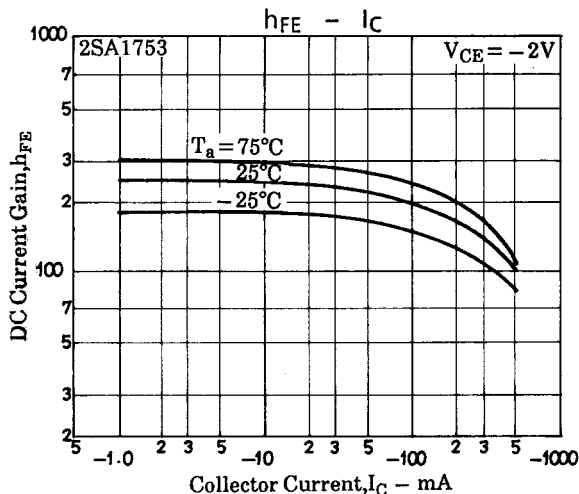
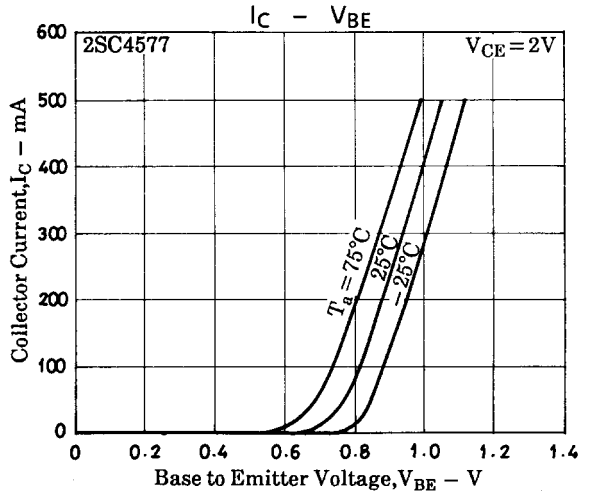
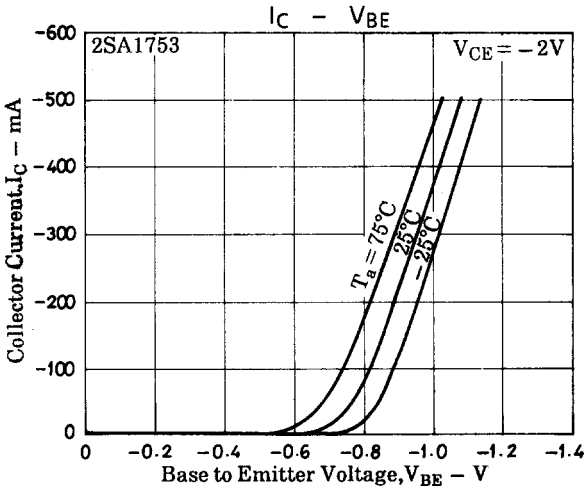
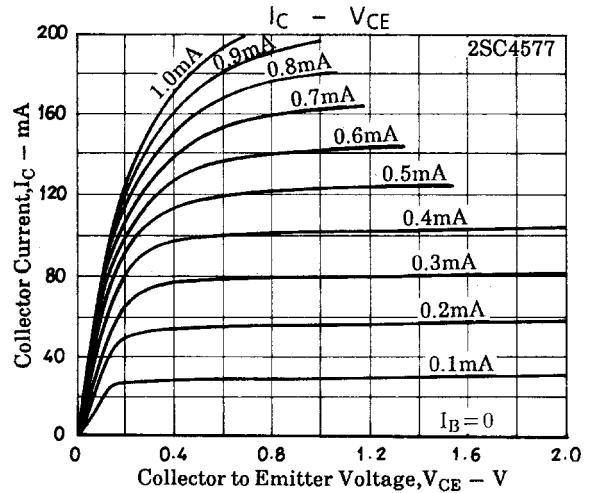
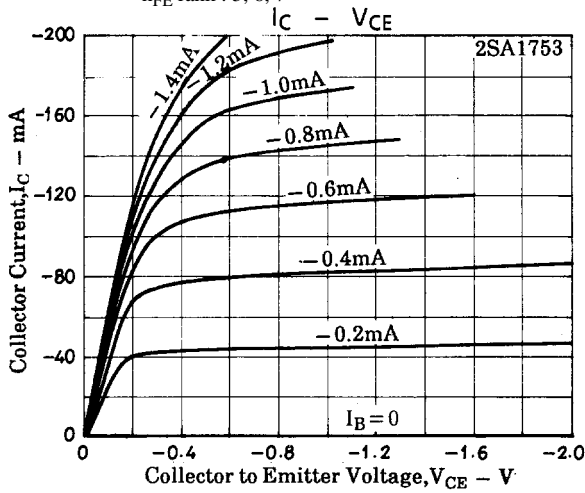
\* : The 2SA1753/2SC4577 are classified by 10mA  $h_{FE}$  as follows :

135	5	270	200	6	400	300	7	600
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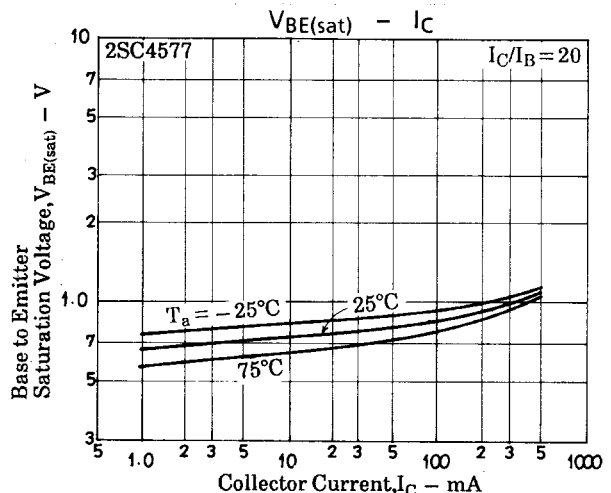
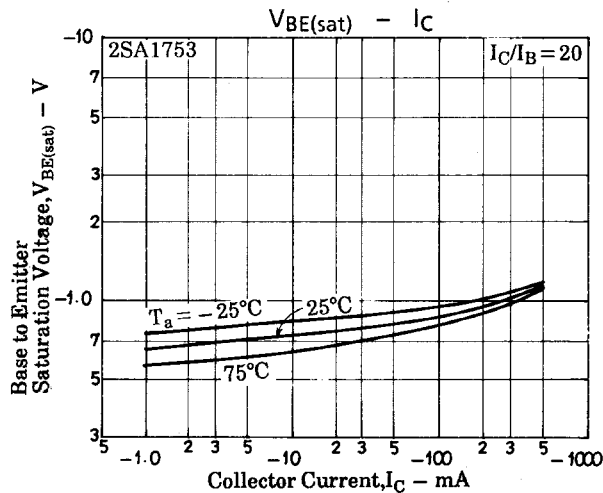
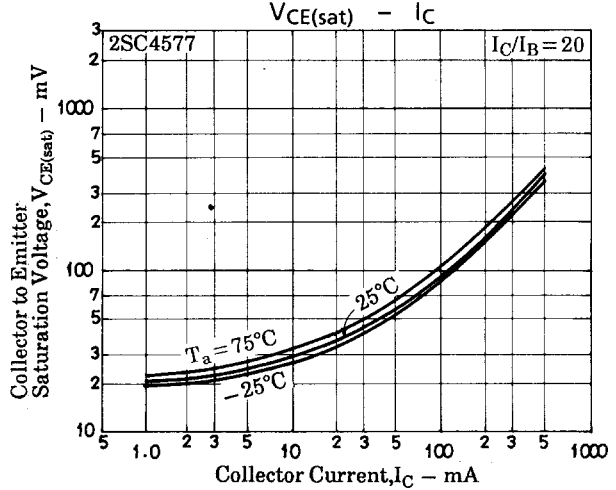
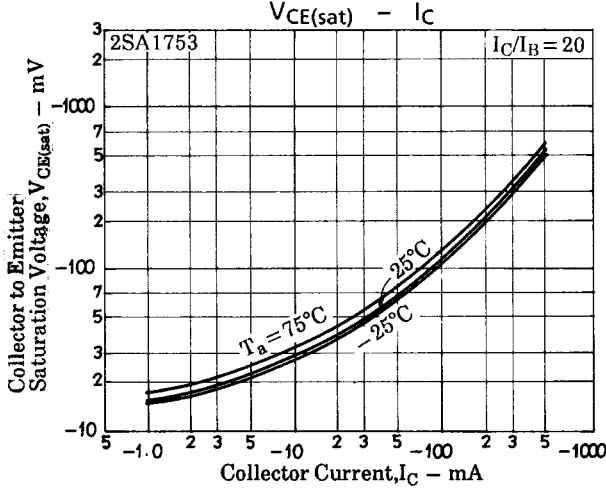
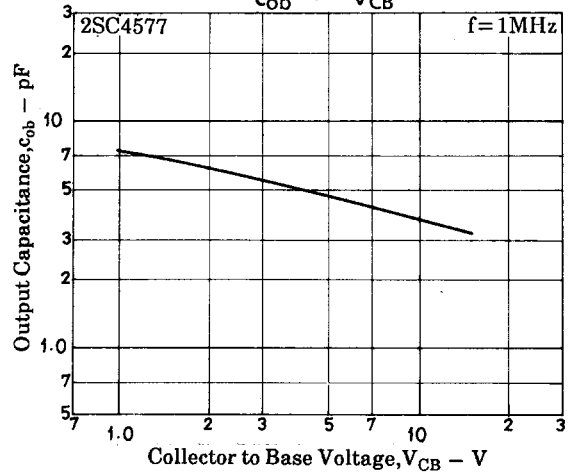
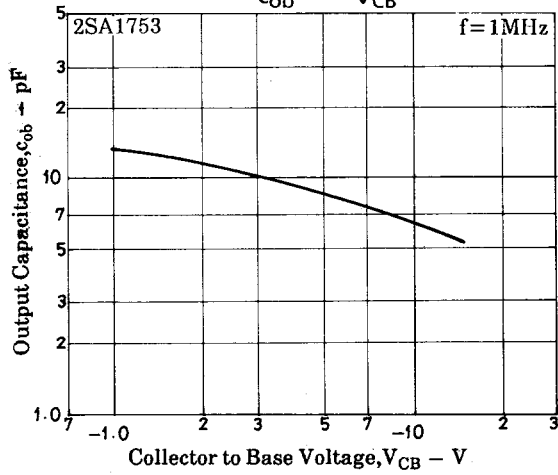
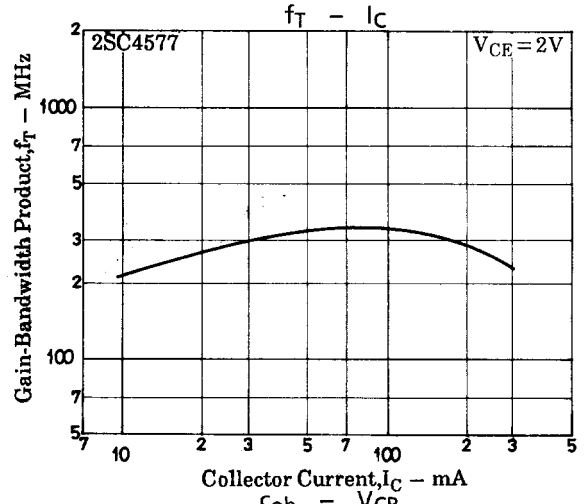
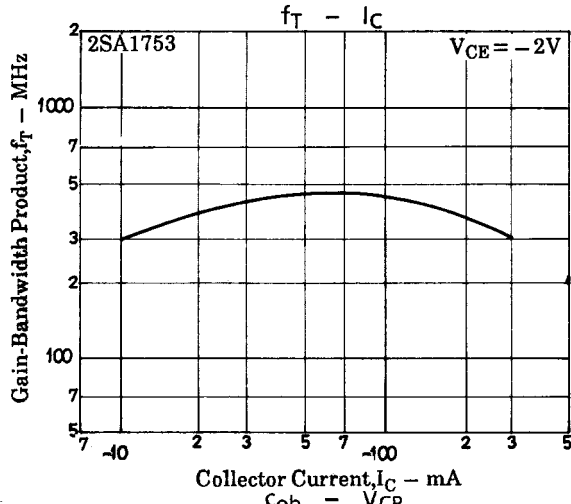
Marking 2SA1753 : ES

2SC4577 : UT

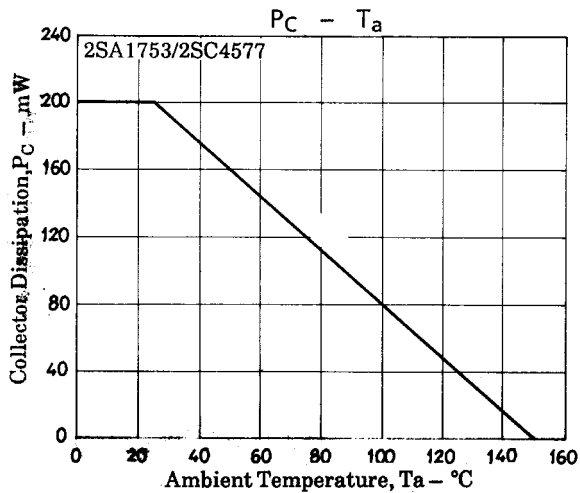
$h_{FE}$  rank : 5, 6, 7



# 2SA1753/2SC4577



## 2SA1753/2SC4577



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