



2SA1745/2SC4555

Low-Frequency General-Purpose Amplifier Applications

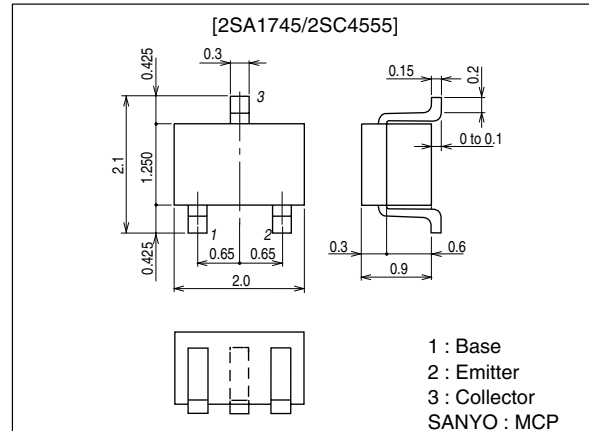
Features

- Ultrasmall-sized package permitting the 2SA1745/2SC4555-applied set to be made small and slim.
- Low collector-to-emitter saturation voltage.

Package Dimensions

unit:mm

2059B



(): 2SA1745

Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	I	Symbo	s	Condition	s	Rating	Unit
Collector-to-Base Voltage	V _{CB}	CBO				(-)20	V
Collector-to-Emitter Voltage	V _{CE}	CEO				(-)15	V
Emitter-to-Base Voltage	V _{EB}	EBO				(-)5	V
Collector Current	I _C	C				(-)500	mA
Collector Current (Pulse)	I _{CP}	CP				(-)1	A
Collector Dissipation	P _C	C				150	mW
Junction Temperature	T _j	T				150	°C
Storage Temperature	T _g	T _{st}				-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	I	Symbo	s	Condition	Ratings			Unit
					min	typ	max	
Collector Cutoff Current	I _C	CBO		V _{CB} = (-)15V, I _E = 0	1			μA
Emitter Cutoff Current	I _E	EBO		V _{EB} = (-)4V, I _C = 0	1			μA

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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		MHz
				(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) 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

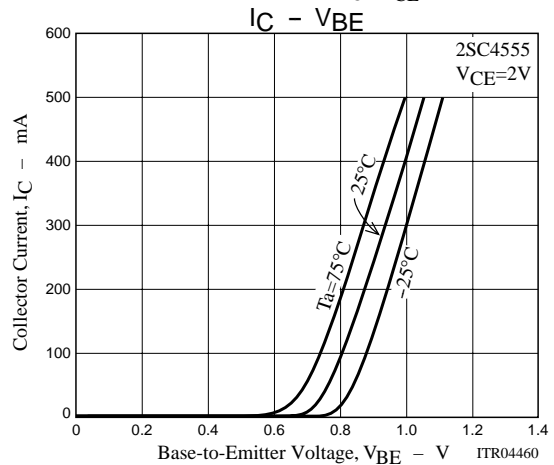
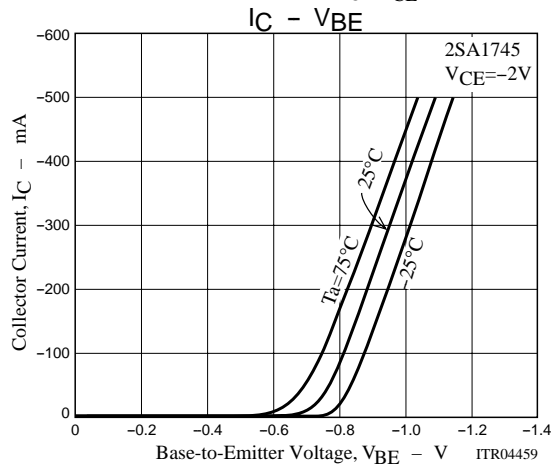
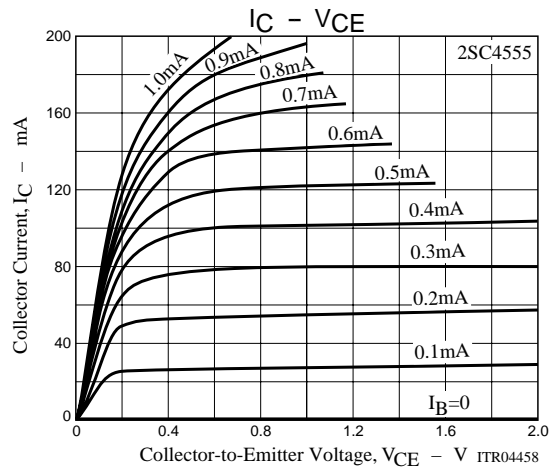
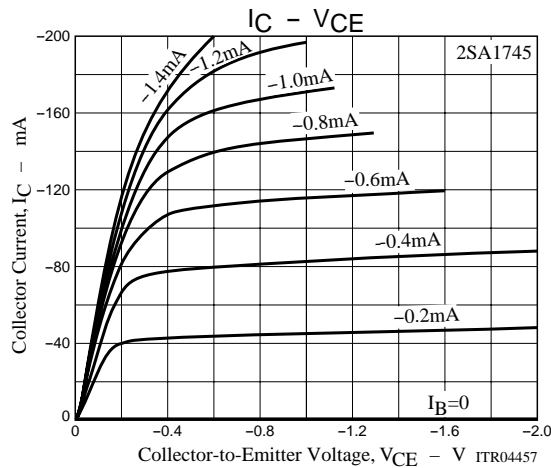
* : The 2SA1745/2SC4555 are classified by 10mA h_{FE} as follows :

Rank	5	6	7
h_{FE}	130 to 270	200 to 400	300 to 600

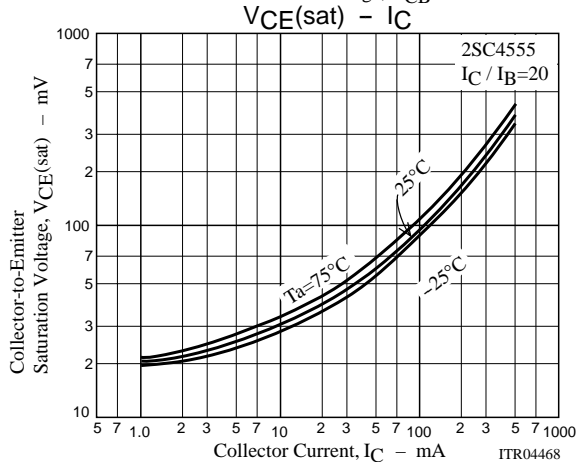
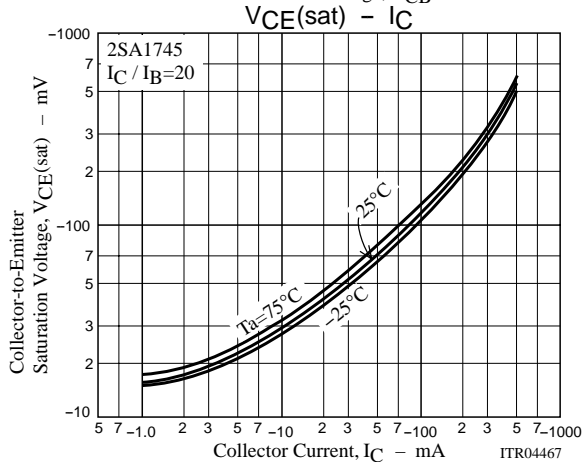
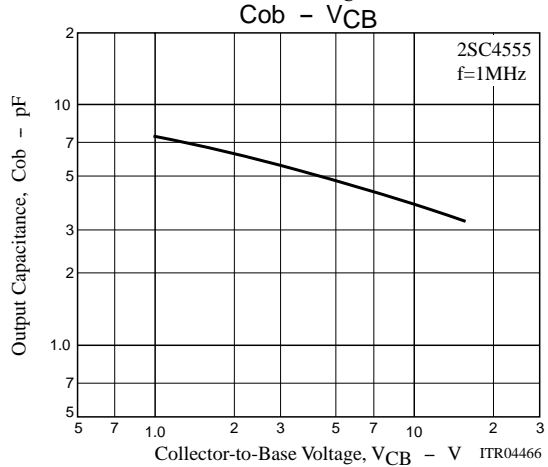
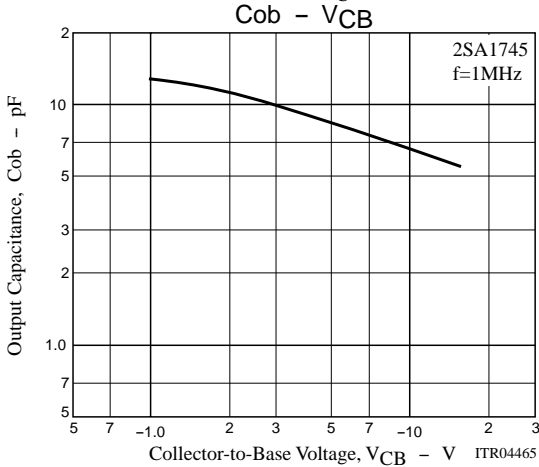
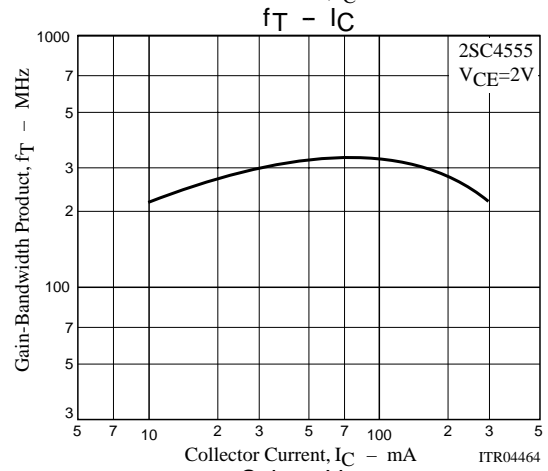
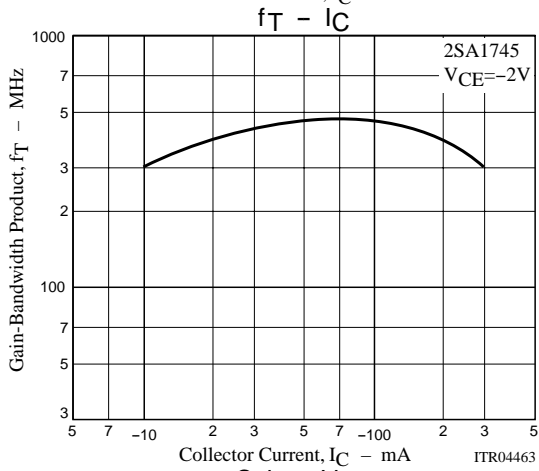
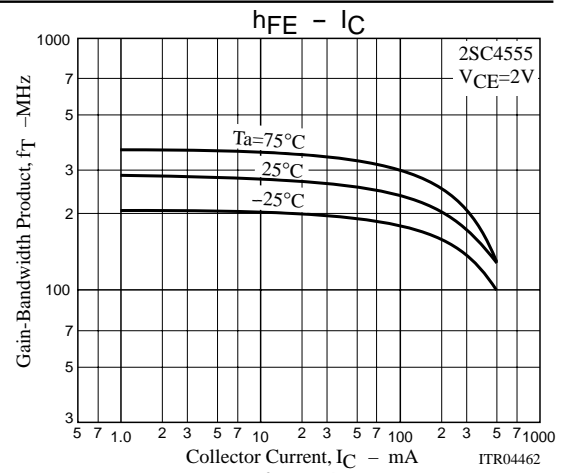
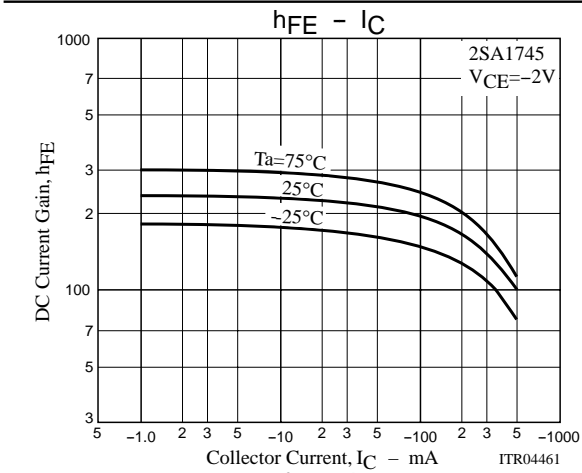
Marking 2SA1745 : ES

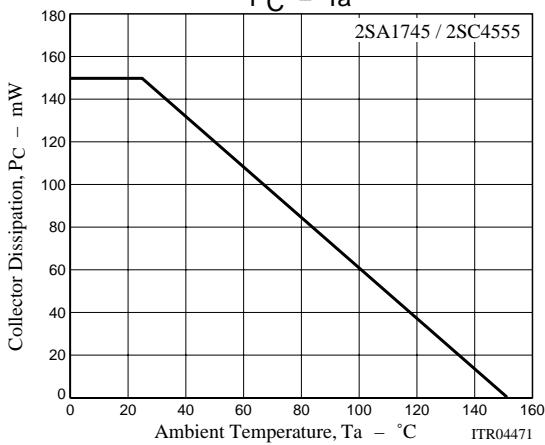
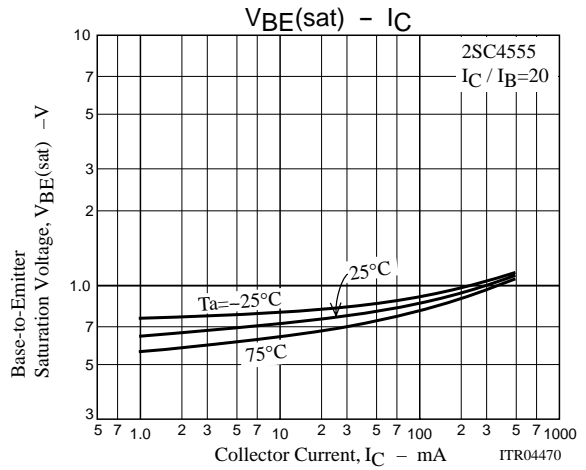
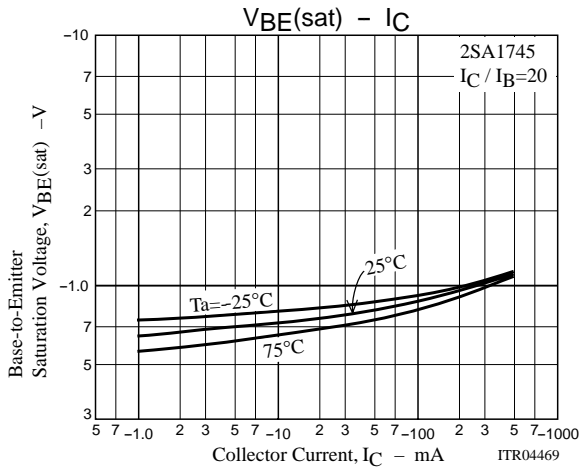
2SC4555 : UT

h_{FE} rank : 5, 6, 7



2SA1745/2SC4555





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