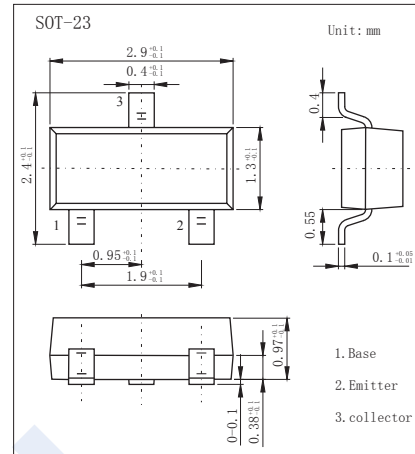


## PNP Transistors

### 2SA1514K

#### ■ Features

- High Breakdown Voltage
- Lead Free/RoHS Compliant.
- Complementary to 2SC3906K



#### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V <sub>CB0</sub>	-120	V
Collector - Emitter Voltage	V <sub>CEO</sub>	-120	
Emitter - Base Voltage	V <sub>EB0</sub>	-5	
Collector Current - Continuous	I <sub>C</sub>	-50	mA
Collector Current - Pulse (Note.1)	I <sub>CP</sub>	-100	
Collector Power Dissipation	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature range	T <sub>stg</sub>	-55 to 150	

Note.1: Pw=100ms, Single Pulse

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>C</sub> = -50 μA, I <sub>E</sub> =0	-120			V
Collector- emitter breakdown voltage	V <sub>CEO</sub>	I <sub>C</sub> = -1 mA, I <sub>B</sub> = 0	-120			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = -50 μA, I <sub>C</sub> =0	-5			
Collector-base cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = -100 V, I <sub>E</sub> =0			-0.5	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -4V, I <sub>C</sub> =0			-0.5	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-10 mA, I <sub>B</sub> =-1 mA			-0.5	V
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-10 mA, I <sub>B</sub> =-1 mA			-1.2	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = -6V, I <sub>C</sub> = -2mA	180		560	
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -12V, I <sub>E</sub> = 0, f=1MHz		3.2		pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -12V, I <sub>E</sub> = 2mA, f=100MHz		140		MHz

#### ■ Classification of h<sub>FE</sub>

Type	2SA1514K-R	2SA1514K-S
Range	180-390	270-560
Marking	RR	RS

### PNP Transistors

### 2SA1514K

■ Typical Characteristics

Fig.1 Ground Emitter Propagation Characteristics

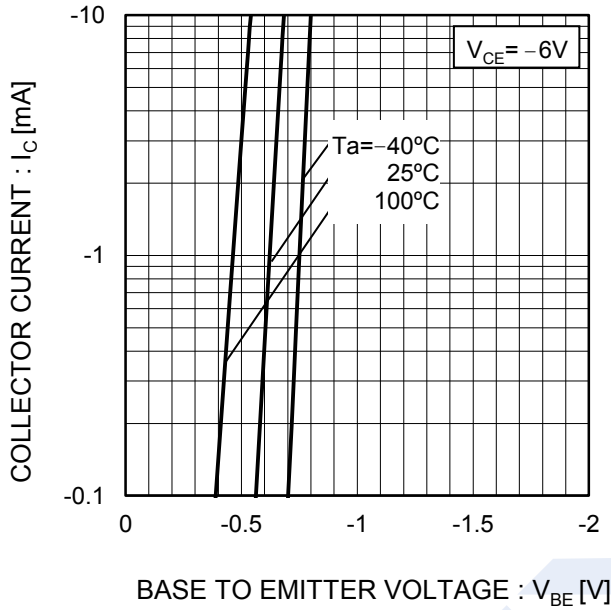


Fig.2 Typical Output Characteristics

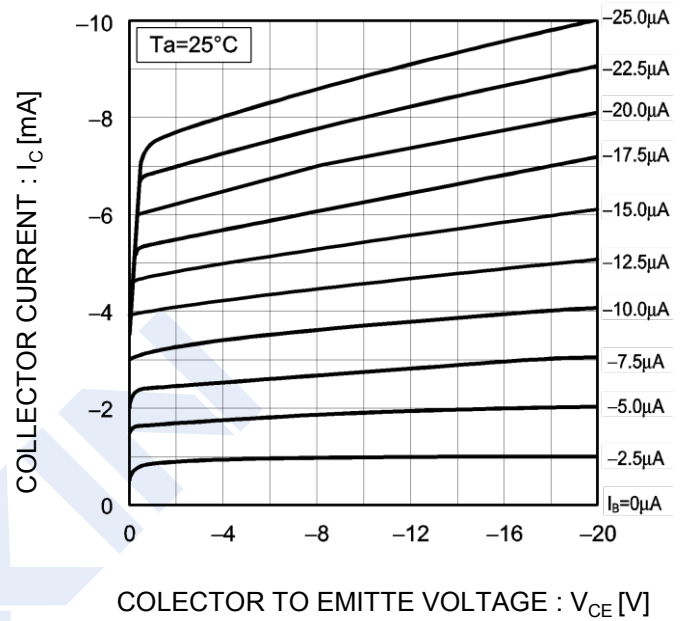


Fig.3 DC Current Gain vs. Collector Current(I)

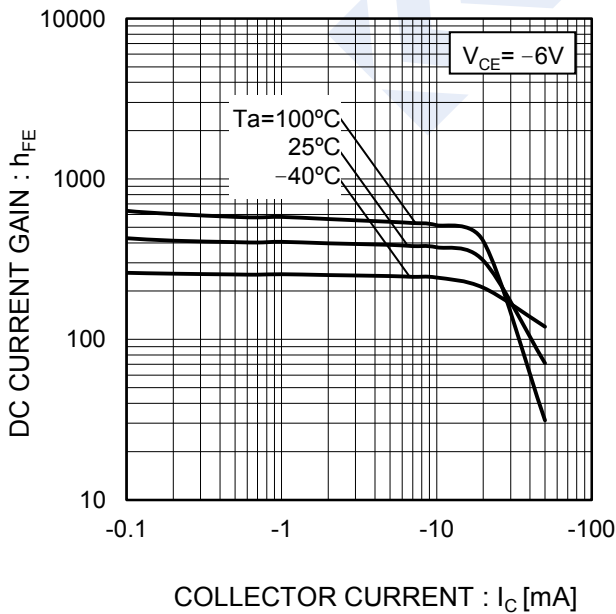
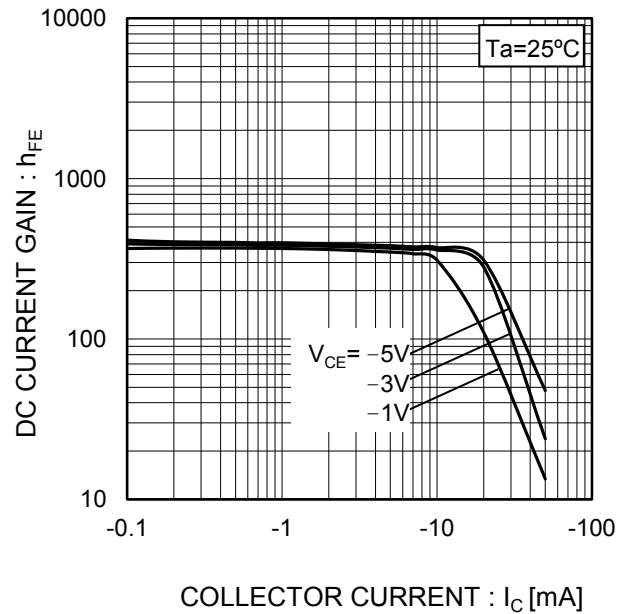


Fig.4 DC Current Gain vs. Collector Current(II)



## PNP Transistors

## 2SA1514K

## ■ Typical Characteristics

Fig.5 Collector-Emmitter Saturation Voltage vs. Collector Current (I)

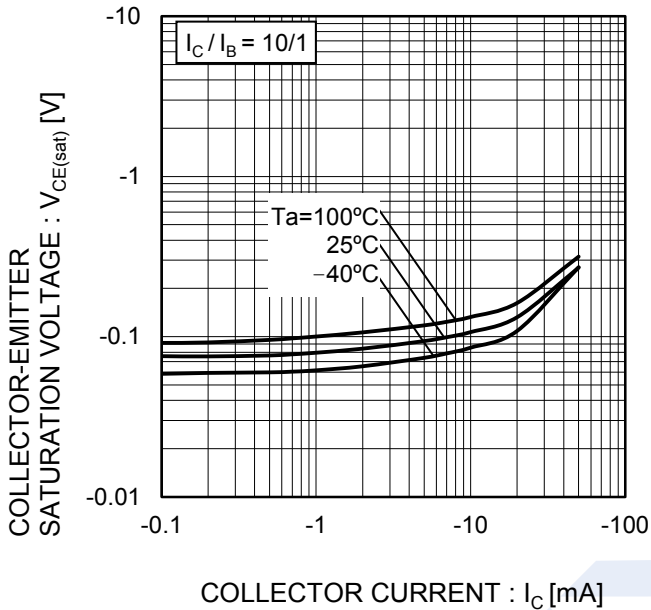


Fig.6 Collector-Emmitter Saturation Voltage vs. Collector Current (II)

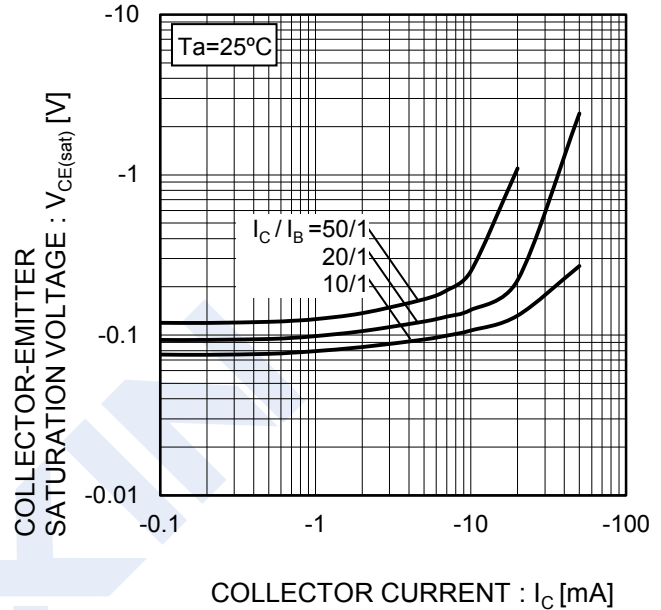


Fig.7 Base-Emmitter Saturation Voltage vs. Collector Current

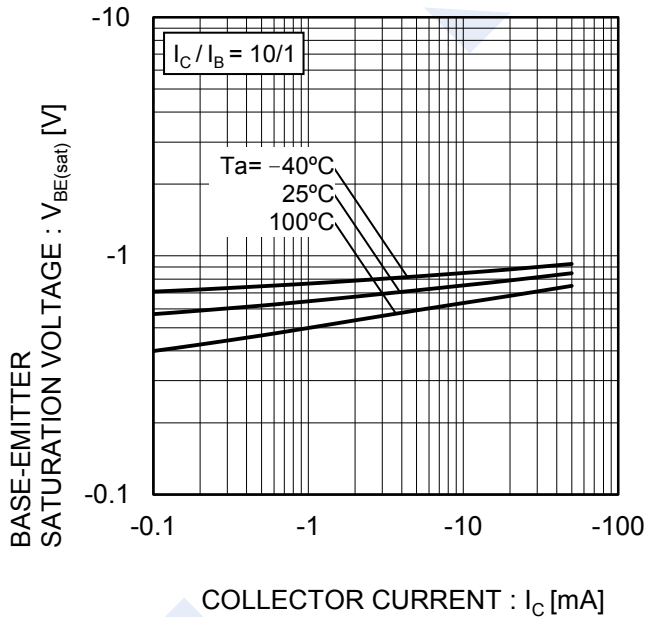
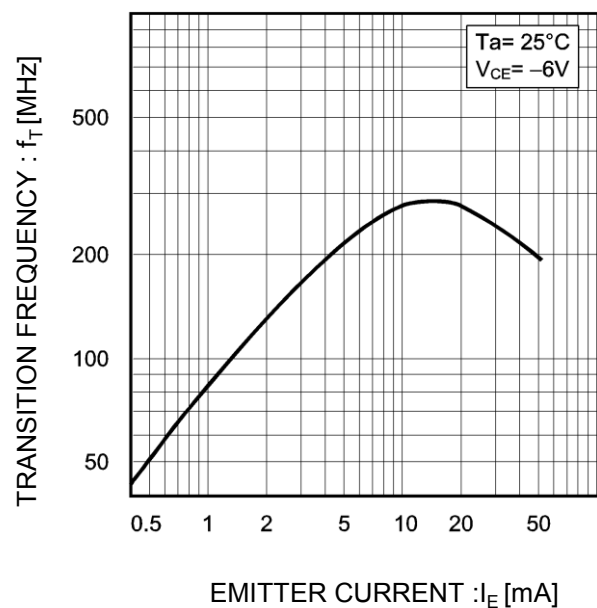


Fig.8 Gain Bandwidth Product vs. Emitter Current



## PNP Transistors

### 2SA1514K

■ Typical Characteristics

Fig.9 Emitter input capacitance vs.  
Emitter-Base Voltage  
Collector output capacitance vs.  
Collector-Base Voltage

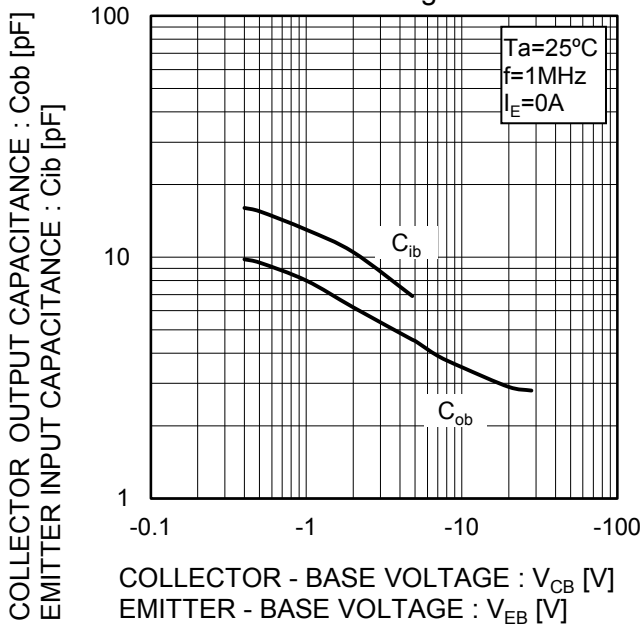


Fig.10 Safe Operating Area

