

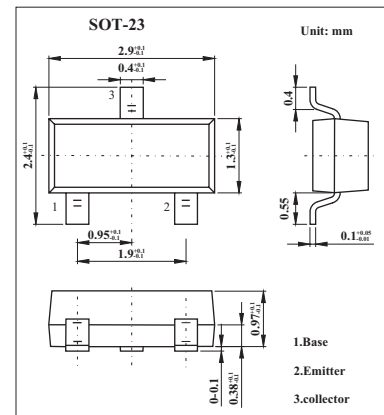
## NPN Transistor

## KC846A,B/KC847A,B,C/KC848A,B,C

(BC846A,B/BC847A,B,C/BC848A,B,C)

### ■ Features

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications



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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	80	V
		50	
		30	
Collector-Emitter Voltage	V <sub>CE0</sub>	65	V
		45	
		30	
Emitter-Base Voltage	V <sub>EB0</sub>	6	V
Collector Current -Continuous	I <sub>C</sub>	0.1	A
Collector Power Dissipation	P <sub>C</sub>	200	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-65 to +150	°C

## KC846A,B/KC847A,B,C/KC848A,B,C (BC846A,B/BC847A,B,C/BC848A,B,C)

### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector-base breakdown voltage	KC846	$I_C = 10 \mu A, I_E = 0$	80			V	
	KC847		50				
	KC848		30				
Collector-emitter breakdown voltage	KC846	$I_C = 10 mA, I_B = 0$	65			V	
	KC847		45				
	KC848		30				
Emitter-base Breakdown voltage	VEBO	$I_E = 10 \mu A, I_C = 0$	6			V	
Collector-base cutoff current	KC846	ICBO	$V_{CB} = 70 V, I_E = 0$			0.1	$\mu A$
	KC847		$V_{CB} = 50 V, I_E = 0$				
	KC848		$V_{CB} = 30 V, I_E = 0$				
Collector-emitter cutoff current	KC846	ICEO	$V_{CE} = 70 V, I_B = 0$			0.1	$\mu A$
	KC847		$V_{CE} = 50 V, I_B = 0$				
	KC848		$V_{CE} = 30 V, I_B = 0$				
Emitter-base cutoff current	IEBO	$V_{EB} = 5 V, I_C = 0$			0.1	$\mu A$	
DC current gain	KC846A,847A,848A	hFE	$V_{CE} = 5 V, I_C = 2 mA$	110		220	
	KC846B,847B,848B			200		450	
	KC847C,848C			420		800	
Collector-emitter saturation voltage	VCE(sat)	$I_C = 100 mA, I_B = 5 mA$			0.5	V	
Base-emitter saturation voltage	VBE(sat)	$I_C = 100 mA, I_B = 5 mA$			1.1	V	
Collector output capacitance	Cob	$V_{CB} = 10 V, f = 1 MHz$			4.5	pF	
Transition frequency	f <sub>T</sub>	$V_{CE} = 5 V, I_C = 10 mA, f = 100 MHz$	100			MHz	

### ■ Marking

NO.	KC846A	KC846B
Marking	1A	1B

NO.	KC847A	KC847B	KC847C
Marking	1E	1F	1G

NO.	KC848A	KC848B	KC848C
Marking	1J	1K	1L

SMD Type Transistors

KC846A,B/KC847A,B,C/KC848A,B,C  
(BC846A,B/BC847A,B,C/BC848A,B,C)

Typical Characteristics

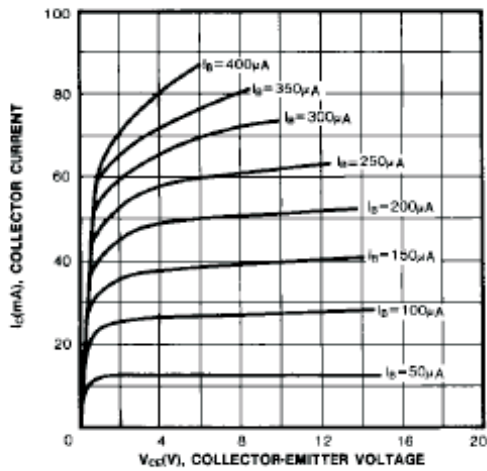


Fig.1 Static Characteristic

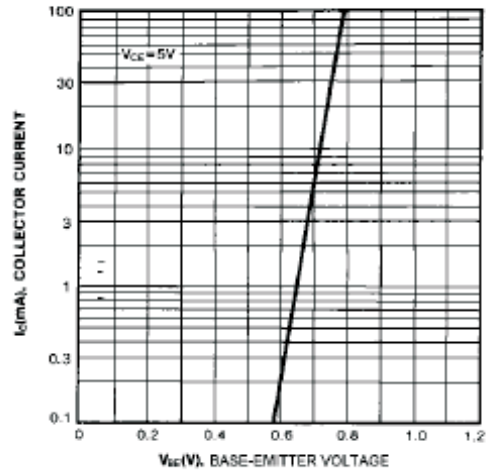


Fig.2 Transfer Characteristic

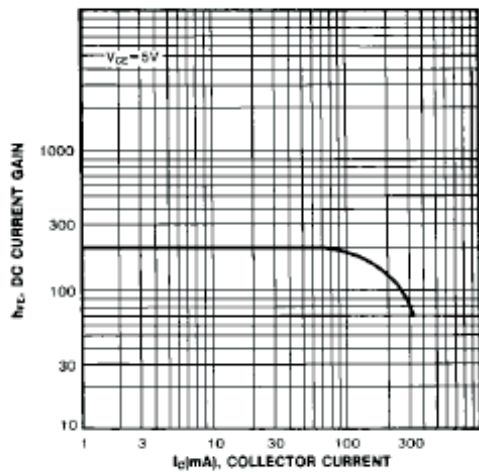


Fig.3 DC Current Gain

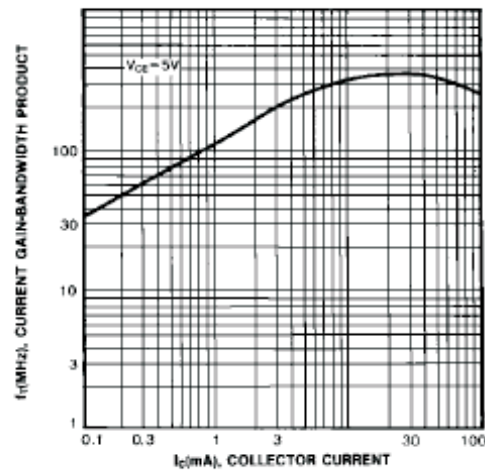


Fig.4 Current Gain Bandwidth Product

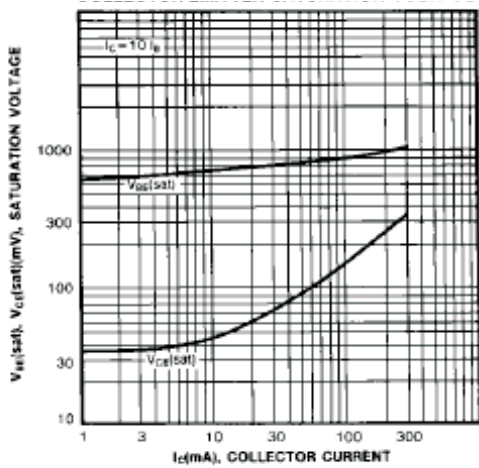


Fig.5 Base Emitter Saturation Voltage  
Collector Emitter Saturation Voltage

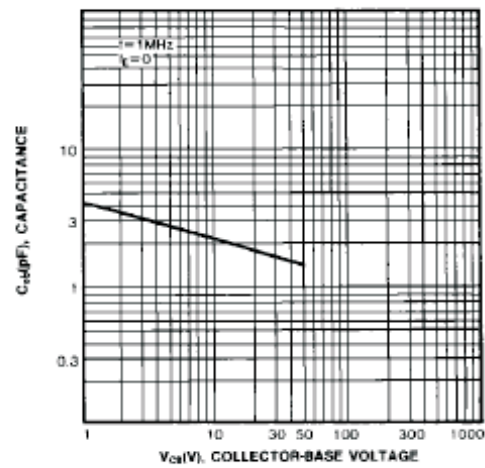


Fig.6 Output Capacitance