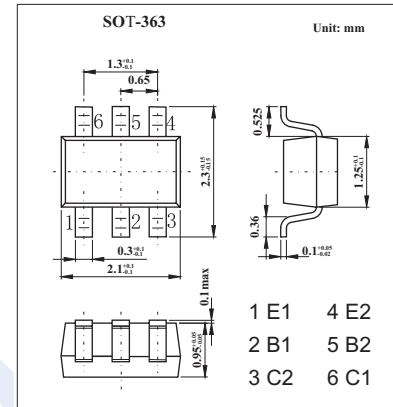


## NPN Multi-Chip General Purpose Amplifier

### KC847S(BC847S)

#### ■ Features

- High current gain
- Low collector-emitter saturation voltage



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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	50	V
Collector-Emitter Voltage	V <sub>CEO</sub>	45	V
Emitter-Base Voltage	V <sub>EBO</sub>	6.0	V
Collector Current	I <sub>c</sub>	100	mA
Total Device Dissipation	P <sub>D</sub>	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	415	°C/W
Operating and Storage Junction Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	V <sub>CB0</sub>	I <sub>c</sub> = 10 μA, I <sub>E</sub> = 0	50			V
Collector-Emitter Breakdown Voltage	V <sub>CEO</sub>	I <sub>c</sub> = 10 mA, I <sub>B</sub> = 0	45			V
Emitter-Base Breakdown Voltage	V <sub>EBO</sub>	I <sub>E</sub> = 10 μA, I <sub>c</sub> = 0	6.0			V
Collector-Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = 30 V, I <sub>E</sub> = 0			15	nA
		V <sub>CB</sub> = 30 V, I <sub>E</sub> = 0, T <sub>A</sub> = 150°C			5.0	μA
DC Current Gain	h <sub>FE</sub>	I <sub>c</sub> = 2.0 mA, V <sub>CE</sub> = 5.0 V	110		630	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> = 10 mA, I <sub>B</sub> = 0.5 mA			0.25	V
		I <sub>c</sub> = 100 mA, I <sub>B</sub> = 5.0 mA			0.65	V
Base-Emitter ON Voltage	V <sub>BE(on)</sub>	I <sub>c</sub> = 2.0 mA, V <sub>CE</sub> = 5.0 V	0.58		0.7	V
		I <sub>c</sub> = 10 mA, V <sub>CE</sub> = 5.0 V			0.77	V
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, f = 1.0 MHz		2.0		pF
Transistion frequency	f <sub>T</sub>	I <sub>c</sub> = 20 mA, V <sub>CE</sub> = 5.0, f = 100 mHz		200		MHz

#### ■ Marking

Marking	1C
---------	----