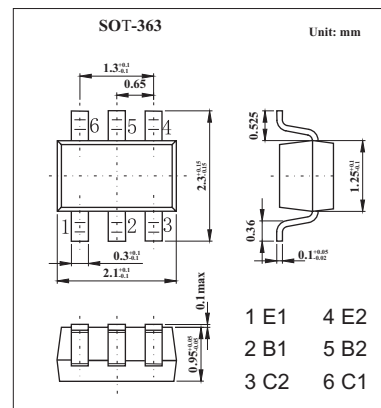
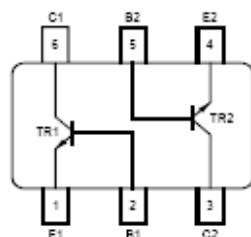


NPN Silicon AF Transistors Array

KC846S(BC846S)

■ Features

- For AF input stage and driver applications
- High current gain.
- Low collector-emitter saturation voltage.



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	80	V
Collector-emitter voltage	V_{CE0}	65	V
Emitter-base voltage	V_{EB0}	6	V
Collector current (DC)	I_C	100	mA
Peak collector current	I_{CM}	200	mA
power dissipation	P_D	250	mW
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 to +150	$^\circ\text{C}$

SMD Type

Diodes

KC846S(BC846S)■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C = 10\ \mu\text{A}$, $I_E = 0$	80			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C = 10\text{ mA}$, $I_B = 0$	65			V
Emitter-base breakdown voltage	V_{EBO}	$I_E = 10\ \mu\text{A}$, $I_C = 0$	6			V
Collector cutoff current	I_{CBO}	$V_{CB} = 30\text{ V}$, $I_E = 0$			15	nA
		$V_{CB} = 30\text{ V}$, $I_E = 0$, $T_A = 150^\circ\text{C}$			5	μA
DC current gain *	h_{FE}	$I_C = 10\ \mu\text{A}$, $V_{CE} = 5\text{ V}$		250		
		$I_C = 2\text{ mA}$, $V_{CE} = 5\text{ V}$	200	290	450	
Collector-emitter saturation voltage*	$V_{CE(sat)}$	$I_C = 10\text{ mA}$, $I_B = 0.5\text{ mA}$		90	250	mV
		$I_C = 100\text{ mA}$, $I_B = 5\text{ mA}$		200	650	
Base-emitter saturation voltage*	$V_{BE(sat)}$	$I_C = 10\text{ mA}$, $I_B = 0.5\text{ mA}$		700		mV
		$I_C = 100\text{ mA}$, $I_B = 5\text{ mA}$		900		
Base-emitter voltage*	$V_{BE(ON)}$	$I_C = 2\text{ mA}$, $V_{CE} = 5\text{ V}$	580	660	700	mV
		$I_C = 10\text{ mA}$, $V_{CE} = 5\text{ V}$			770	
Collector-base capacitance	C_{cb}	$V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$		2		pF
Emitter-base capacitance	C_{eb}	$V_{EB} = 0.5\text{ V}$, $f = 1\text{ MHz}$		10		pF
Noise figure	F	$I_C = 200\ \mu\text{A}$, $V_{CE} = 5\text{ V}$, $R_s = 2\text{ k}\Omega$, $f = 1\text{ kHz}$, $\Delta f = 200\text{ Hz}$			10	dB
Transition frequency	f_T	$I_C = 20\text{ mA}$, $V_{CE} = 5\text{ V}$, $f = 100\text{ MHz}$		250		MHz

* Pulse test: $t < 300\ \mu\text{s}$; $D < 2\%$

■ Marking

Marking	1D
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