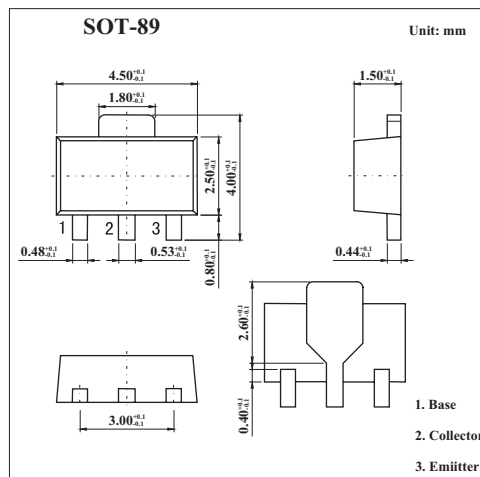


# KST50; KST51; KST52 (BST50; BST51; BST52)

■ Features

- High current (max. 0.5 A)
- Low voltage (max. 80 V)
- Integrated diode and resistor.



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit	
Collector-base voltage	V <sub>CBO</sub>	KST50	60	V
		KST51	80	V
		KST52	90	V
Collector-emitter voltage	V <sub>CEO</sub>	KST50	45	V
		KST51	60	V
		KST52	80	V
Emitter-base voltage	V <sub>EBO</sub>	5	V	
Collector current (DC)	I <sub>c</sub>	0.5	A	
Peak collector current	I <sub>CM</sub>	1.5	A	
base current	I <sub>B</sub>	100	mA	
Power dissipation T <sub>amb</sub> ≤ 25 °C *	P <sub>D</sub>	1.3	W	
Thermal resistance from junction to ambient *	R <sub>th(j-a)</sub>	96	K/W	
Thermal resistance from junction to solder point	R <sub>th(j-s)</sub>	16	K/W	
Junction temperature	T <sub>j</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-65 to +150	°C	

\* Device mounted on a printed-circuit board, single sided copper, tinplated, mounting pad for collector 6 cm<sup>2</sup>.



## KST50; KST51; KST52 (BST50; BST51; BST52)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	KST50	V <sub>BE</sub> =0;V <sub>CE</sub> =45V			50	nA
	KST51	V <sub>BE</sub> =0;V <sub>CE</sub> =60V			50	nA
	KST52	V <sub>BE</sub> =0;V <sub>CE</sub> =80V			50	nA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = 4V, I <sub>C</sub> = 0			50	nA
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = 150mA; V <sub>CE</sub> = 10 V	1000			
		I <sub>C</sub> =500 mA; V <sub>CE</sub> = 10V	2000			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 500 mA; I <sub>B</sub> = 0.5 mA			1.3	V
		I <sub>C</sub> = 500 mA; I <sub>B</sub> = 0.5mA;T <sub>J</sub> =150°C			1.3	V
Base to emitte rsaturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 500 mA; I <sub>B</sub> =0.5mA			1.9	V
turn-on time	t <sub>on</sub>	I <sub>Con</sub> = 500 mA; I <sub>Bon</sub> = 0.5 mA;		400		ns
turn-off time	t <sub>off</sub>	I <sub>Boff</sub> = -0.5 mA		1500		ns
Transition frequency	f <sub>T</sub>	I <sub>C</sub> = 500 mA; V <sub>CE</sub> = 5 V; f = 100 MHz		200		MHz

■ Marking

NO.	KST50	KST51	KST52
Marking	AS1	AS2	AS3