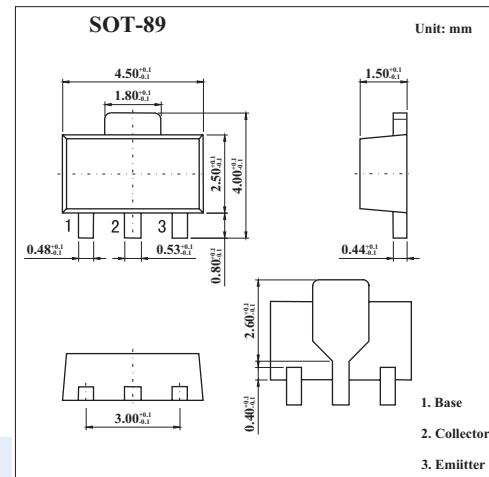


NPN Darlington Transistors

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 _{CBO}	60	V
		80	V
		90	V
Collector-emitter voltage	V _{CCEO}	45	V
		60	V
		80	V
Emitter-base voltage	V _{EBO}	5	V
Collector current (DC)	I _C	0.5	A
Peak collector current	I _{CM}	1.5	A
base current	I _B	100	mA
Power dissipation T _{amb} ≤ 25 °C *	P _D	1.3	W
Thermal resistance from junction to ambient *	R _{th(j-a)}	96	K/W
Thermal resistance from junction to solder point	R _{th(j-s)}	16	K/W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-65 to +150	°C

* Device mounted on a printed-circuit board, single sided copper, tinplated, mounting pad for collector 6 cm².

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

■ Electrical Characteristics Ta = 25°C

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

■ Marking

NO.	KST50	KST51	KST52
Marking	AS1	AS2	AS3