

FCX495

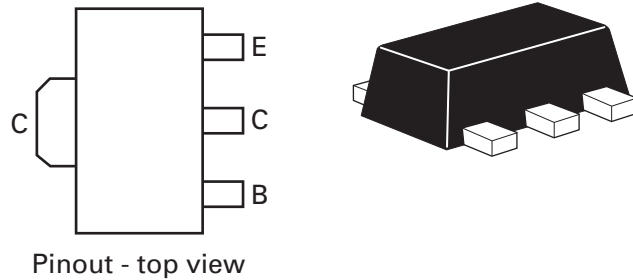
SOT89 NPN silicon planar high voltage transistor

Features

- 150 Volt V_{CEO}
- 1 Amp continuous current

Device marking

N95



Pinout - top view

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	170	V
Collector-emitter voltage	V_{CEO}	150	V
Emitter-base voltage	V_{EBO}	5	V
Continuous collector current	I_C	1	A
Peak pulse current	I_{CM}	2	A
Base current	I_B	200	mA
Power dissipation at $T_{amb} = 25^\circ\text{C}$	P_{tot}	1	W
Operating and storage temperature range	$T_j; T_{stg}$	-65 to +150	$^\circ\text{C}$

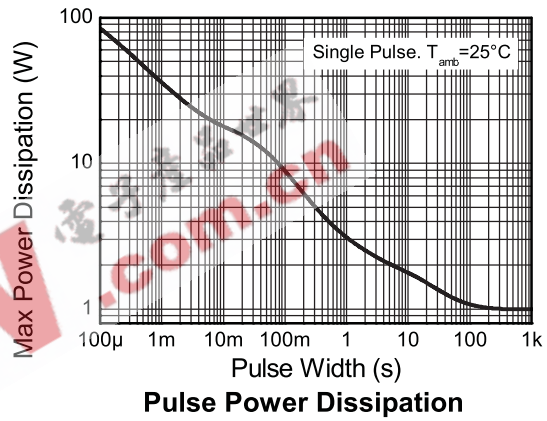
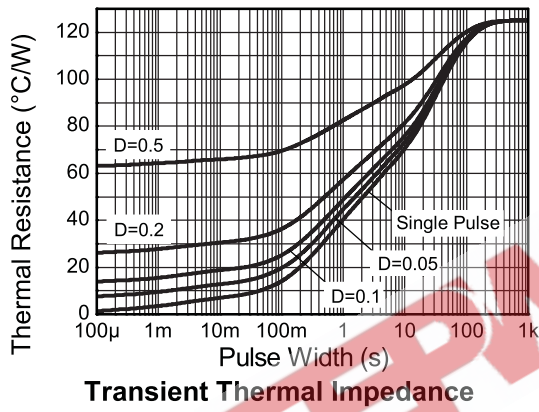
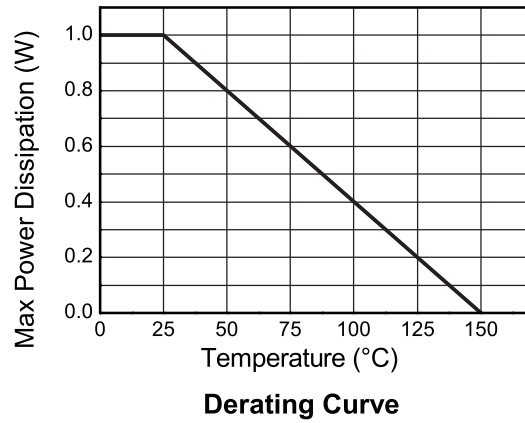
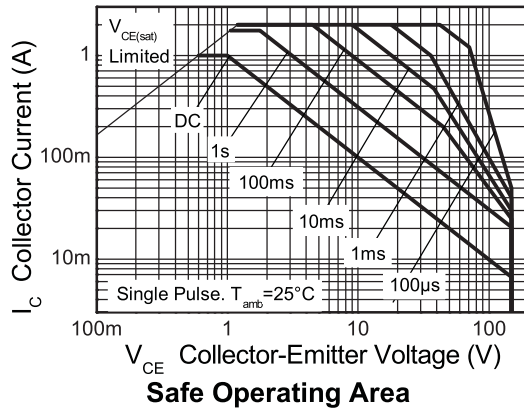
Electrical characteristics (at $T_{amb} = 25^\circ\text{C}$)

Parameter	Symbol	Min.	Max.	Unit	Conditions
Breakdown voltages	$V_{(BR)CBO}$	170		V	$I_C=100\mu\text{A}$
	$V_{CEO(sus)}$	150		V	$I_C=10\text{mA}^{(*)}$
	$V_{(BR)EBO}$	5		V	$I_E=100\mu\text{A}$
Collector cut-off currents	I_{CBO}, I_{CES}		100	nA	$V_{CB}=150\text{V}, V_{CE}=150\text{V}$
Emitter cut-off current	I_{EBO}		100	nA	$V_{EB}=4\text{V}$
Emitter saturation voltages	$V_{CE(sat)}$		0.2	V	$I_C=250\text{mA}, I_B=25\text{mA}^{(*)}$
			0.3	V	$I_C=500\text{mA}, I_B=50\text{mA}^{(*)}$
	$V_{BE(sat)}$		1.0	V	$I_C=500\text{mA}, I_B=50\text{mA}^{(*)}$
Base-emitter turn on voltage	$V_{BE(on)}$		1.0	V	$I_C=500\text{mA}, V_{CE}=10\text{V}^{(*)}$
Static forward current transfer ratio	h_{FE}	100	300		$I_C=1\text{mA}, V_{CE}=10\text{V}$
		100			$I_C=250\text{mA}, V_{CE}=10\text{V}^{(*)}$
		50			$I_C=500\text{mA}, V_{CE}=10\text{V}^{(*)}$
		10			$I_C=1\text{A}, V_{CE}=10\text{V}^{(*)}$
Transition frequency	f_T	100		MHz	$I_C=50\text{mA}, V_{CE}=10\text{V}$ $f=100\text{MHz}$
Collector-base breakdown voltage	C_{obo}		10	pF	$V_{CB}=10\text{V}, f=1\text{MHz}$

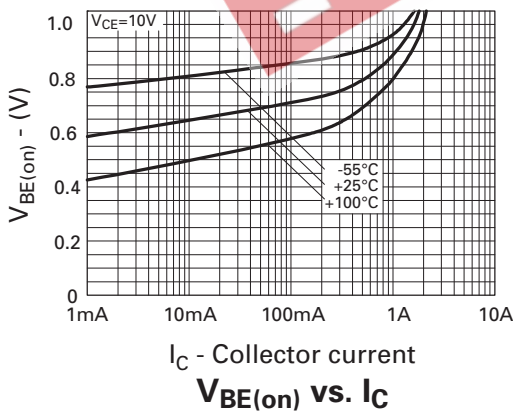
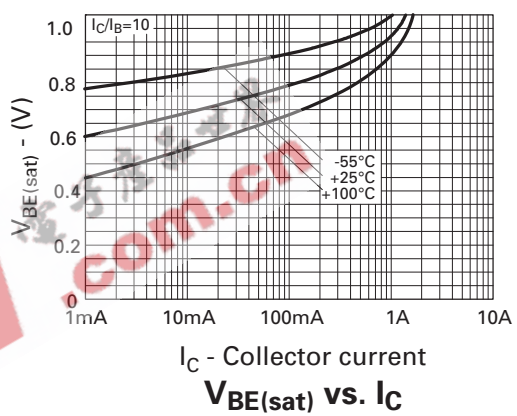
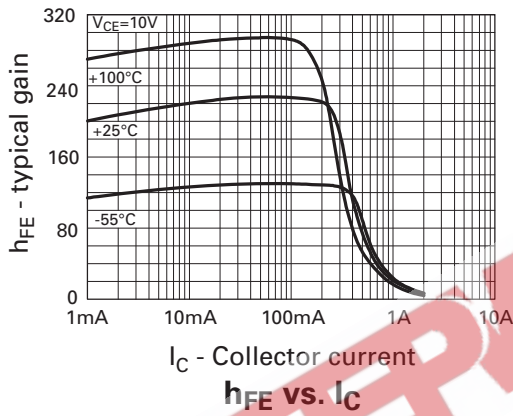
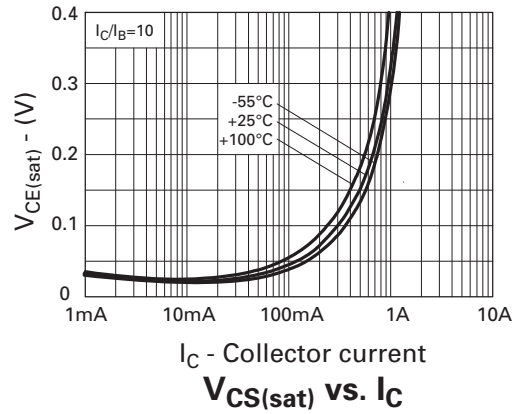
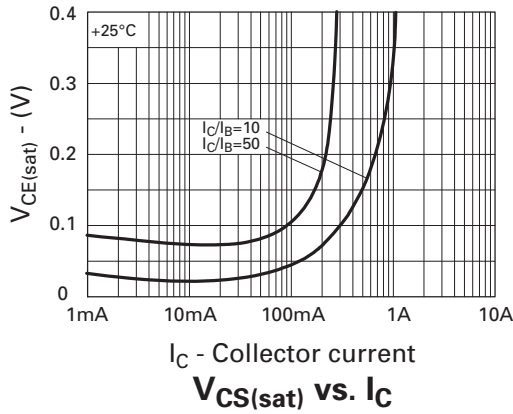
NOTES:

(*) Measured under pulsed conditions. Pulse width = 300 μs . Duty cycle $\leq 2\%$

Typical characteristics



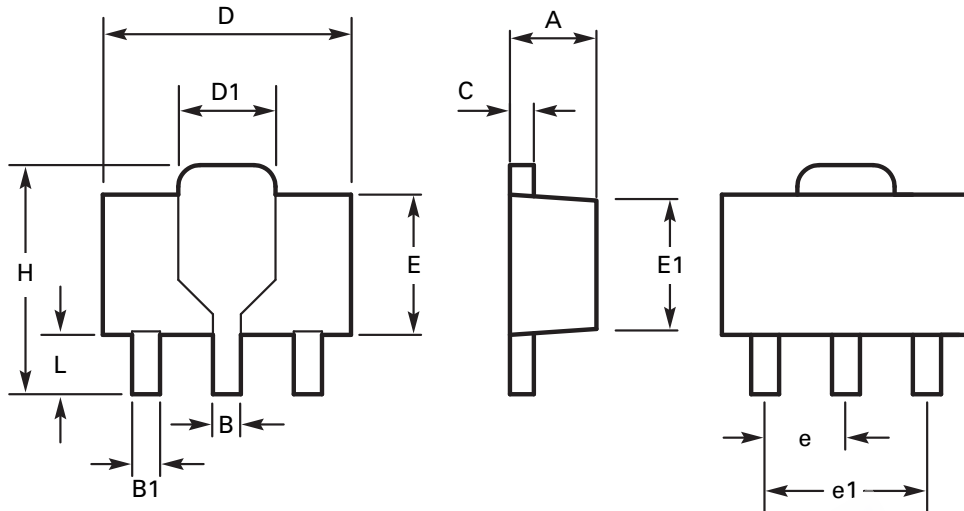
Typical characteristics



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Package outline - SOT89



DIM	Millimeters		Inches		DIM	Millimeters		Inches	
	Min	Max	Min	Max		Min	Max	Min	Max
A	1.40	1.60	0.550	0.630	E	2.29	2.60	0.090	0.102
B	0.44	0.56	0.017	0.022	E1	2.13	2.29	0.084	0.090
B1	0.36	0.48	0.014	0.019	e	1.50 BSC		0.059 BSC	
C	0.35	0.44	0.014	0.017	e1	3.00 BSC		0.118 BSC	
D	4.40	4.60	0.173	0.181	H	3.94	4.25	0.155	0.167
D1	1.52	1.83	0.064	0.072	L	0.89	1.20	0.035	0.047

Note: Controlling dimensions are in millimeters. Approximate dimensions are provided in inches

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