

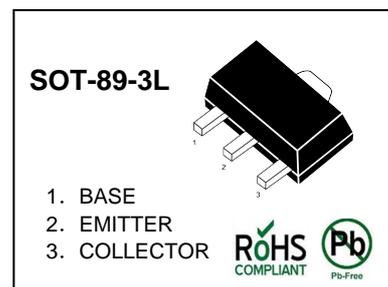
NPN silicon planar high voltage transistor

Features

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

Device marking

N95



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	$^\circ\text{C}$

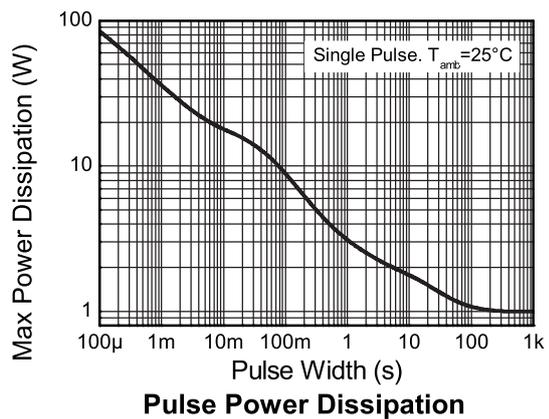
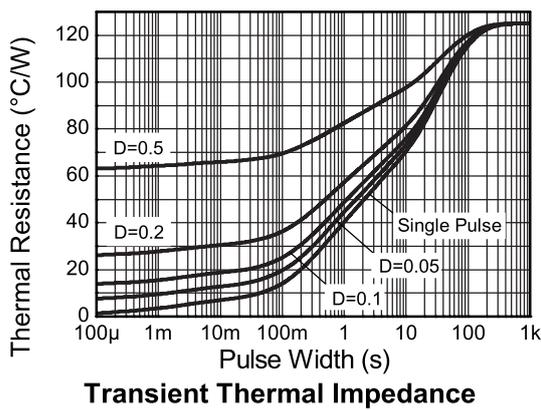
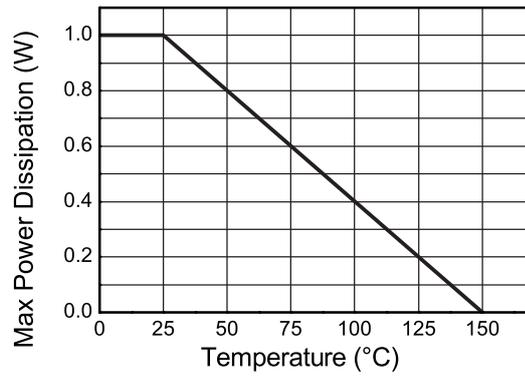
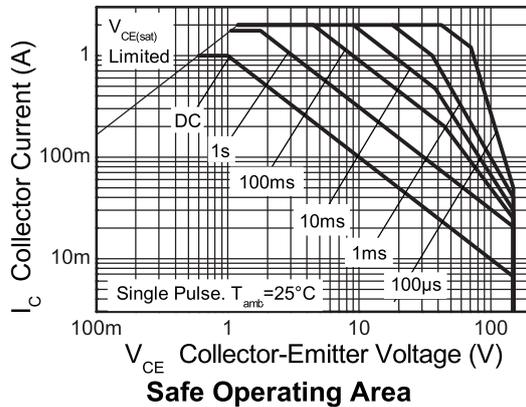
Electrical characteristics (at $T_{amb} = 25^\circ\text{C}$)

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	$V_{CB}=10\text{V}, f=1\text{MHz}$

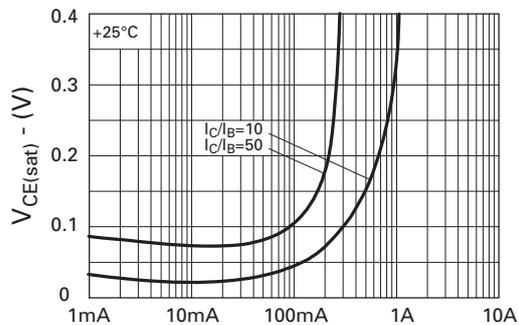
NOTES:

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

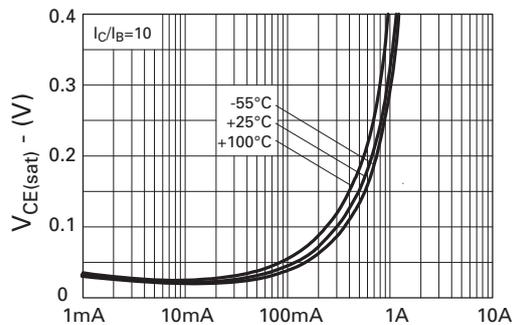
Typical Characteristics



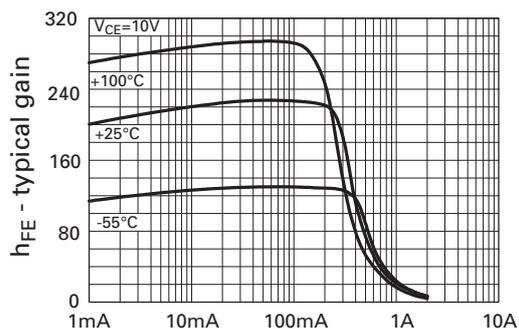
Typical Characteristics



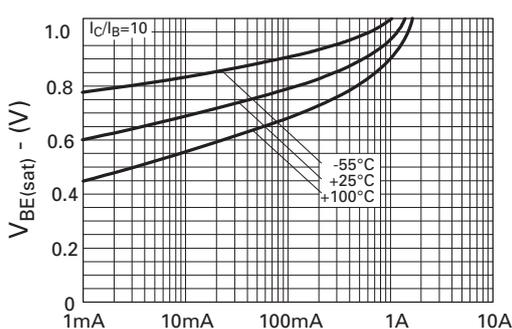
I_C - Collector current
 $V_{CE(sat)}$ vs. I_C



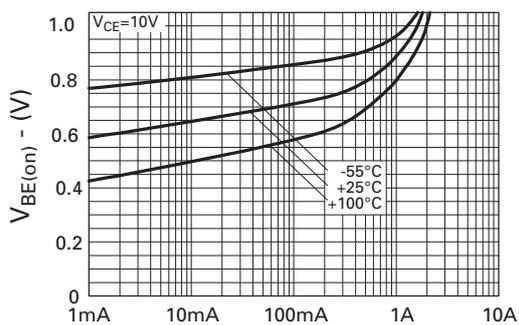
I_C - Collector current
 $V_{CE(sat)}$ vs. I_C



I_C - Collector current
 h_{FE} vs. I_C



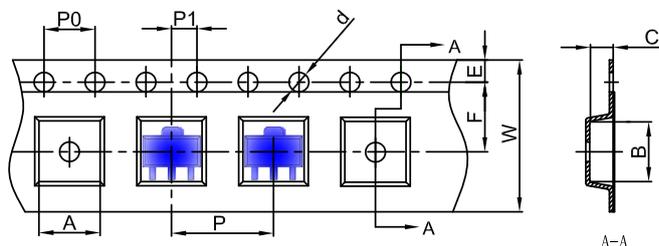
I_C - Collector current
 $V_{BE(sat)}$ vs. I_C



I_C - Collector current
 $V_{BE(on)}$ vs. I_C

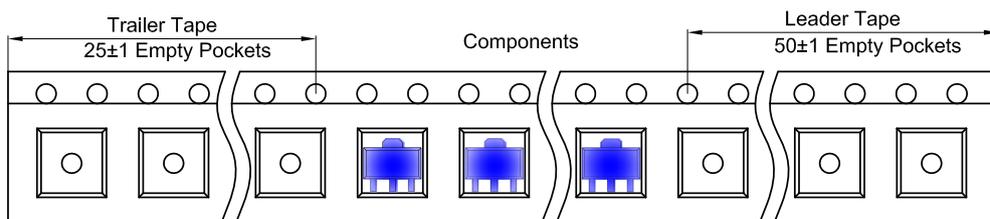
SOT-89-3L Tape and Reel

SOT-89-3L Embossed Carrier Tape

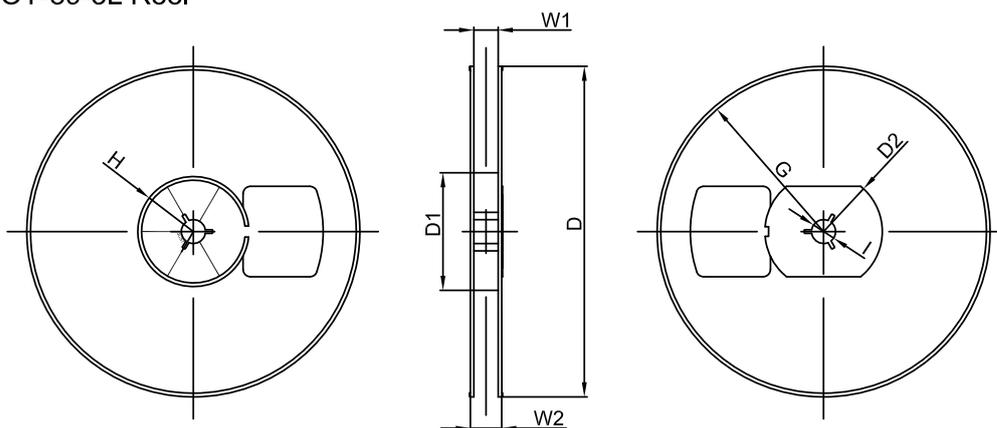


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-89-3L	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

SOT-89-3L Tape Leader and Trailer

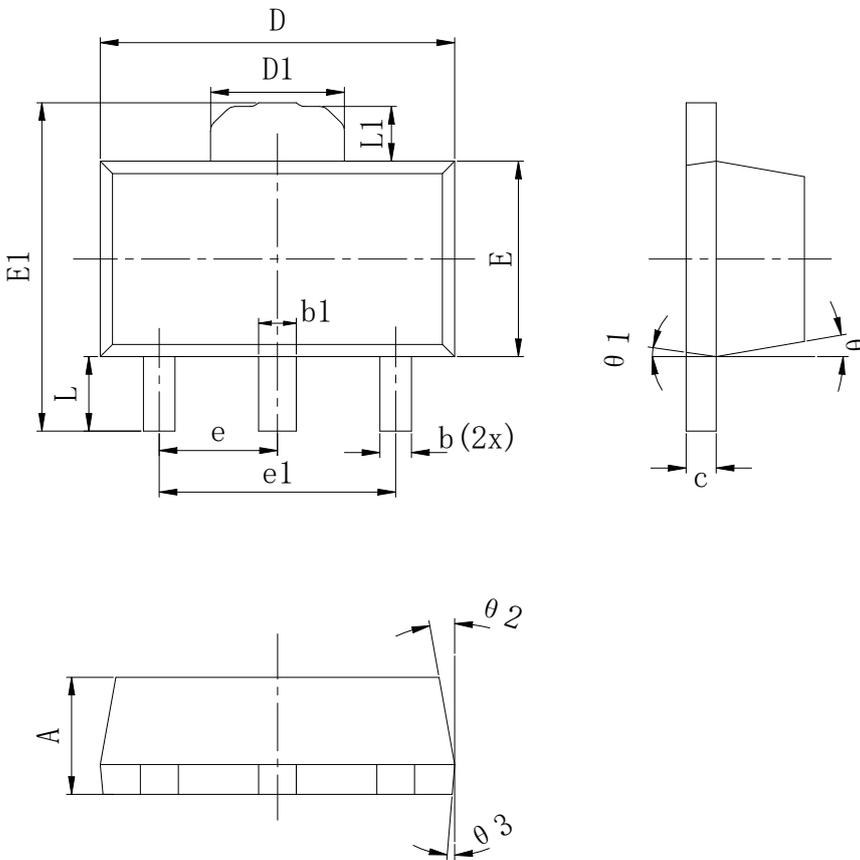


SOT-89-3L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø180.00	60.00	R32.00	R86.50	R30.00	Ø13.00	13.20	16.50

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
1000 pcs	7 inch	10,000 pcs	203×203×195	40,000 pcs	438×438×220	



SYMBOL	MILLIMETER		
	MIN	TYP.	MAX
A	1.400	1.500	1.600
b	0.320	0.400	0.520
b1	0.400	0.480	0.580
c	0.350	0.381	0.440
D	4.400	4.500	4.600
D1	1.700REF		
E	2.400	2.500	2.600
E1	4.050	4.200	4.350
e	1.500TYP.		
e1	3.000TYP.		
L	0.800	0.950	1.200
L1	0.700REF		
θ	10° REF		
θ 1	8° REF		
θ 2	10° REF		
θ 3	5° REF		

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