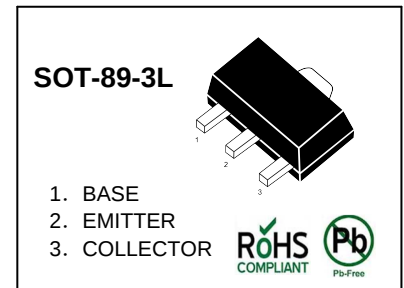


NPN Silicon Epitaxial Planar Transistor

for general purpose applications



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

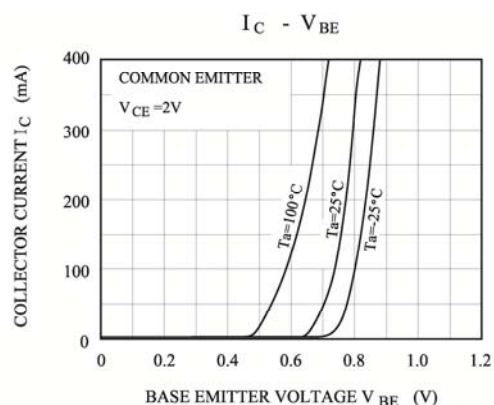
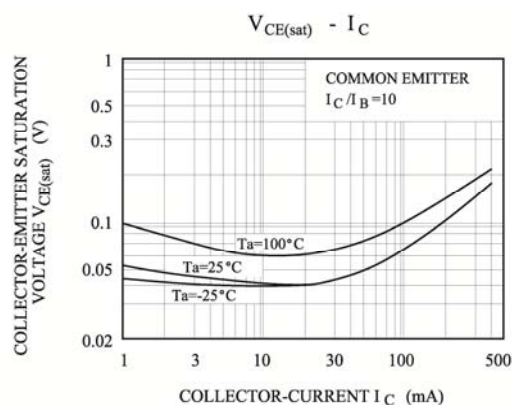
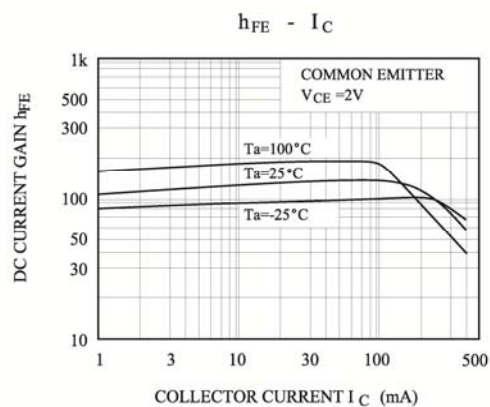
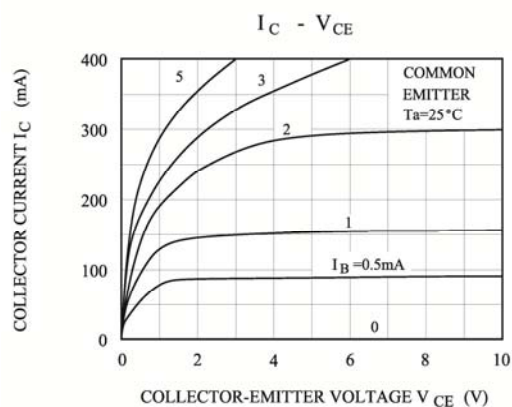
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	80	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	400	mA
Base Current	I_B	80	mA
Total Power Dissipation	P_{tot}	0.5 1 ¹⁾	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ When mounted on a 250 mm² x 0.8 t ceramic substrate.

Characteristics at $T_a = 25^\circ\text{C}$

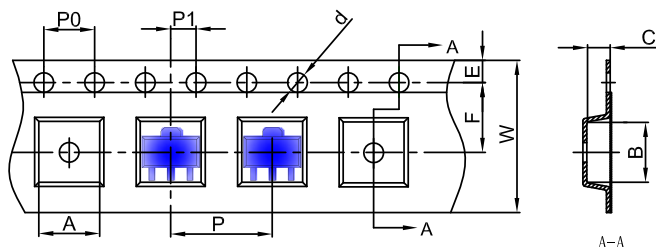
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 2\text{ V}$, $I_C = 50\text{ mA}$	h_{FE}	70	-	140	-
Current Gain Group O		120	-	240	-
Y		50	-	-	-
at $V_{CE} = 2\text{ V}$, $I_C = 200\text{ mA}$	h_{FE}	50	-	-	-
Collector Base Cutoff Current at $V_{CB} = 80\text{ V}$	I_{CBO}	-	-	100	nA
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	-	100	nA
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	80	-	-	V
Collector Emitter Saturation Voltage at $I_C = 200\text{ mA}$, $I_B = 20\text{ mA}$	$V_{CE(sat)}$	-	-	0.4	V
Base Emitter Voltage at $V_{CE} = 2\text{ V}$, $I_C = 5\text{ mA}$	$V_{BE(on)}$	0.55	-	0.8	V
Transition Frequency at $V_{CE} = 10\text{ V}$, $I_C = 10\text{ mA}$	f_T	-	100	-	MHz
Collector Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	10	-	pF

Typical Characteristics



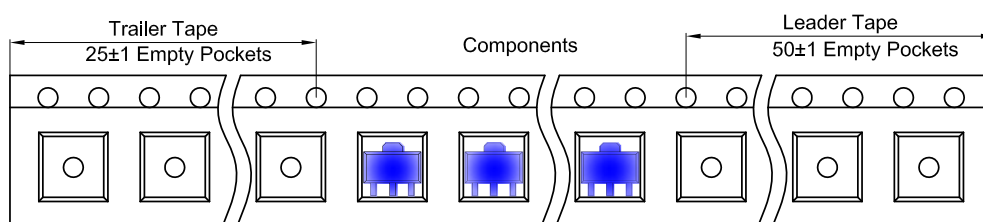
SOT-89-3L Tape and Reel

SOT-89-3L Embossed Carrier Tape

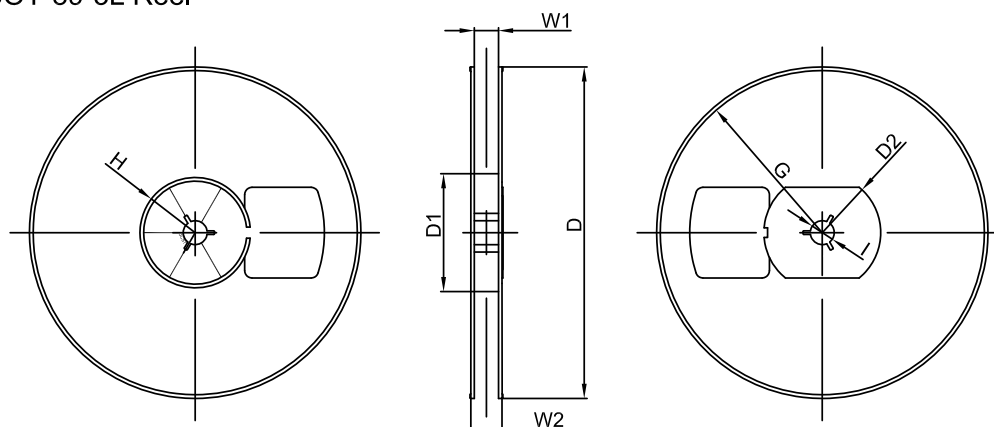


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-89-3L	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

SOT-89-3L Tape Leader and Trailer

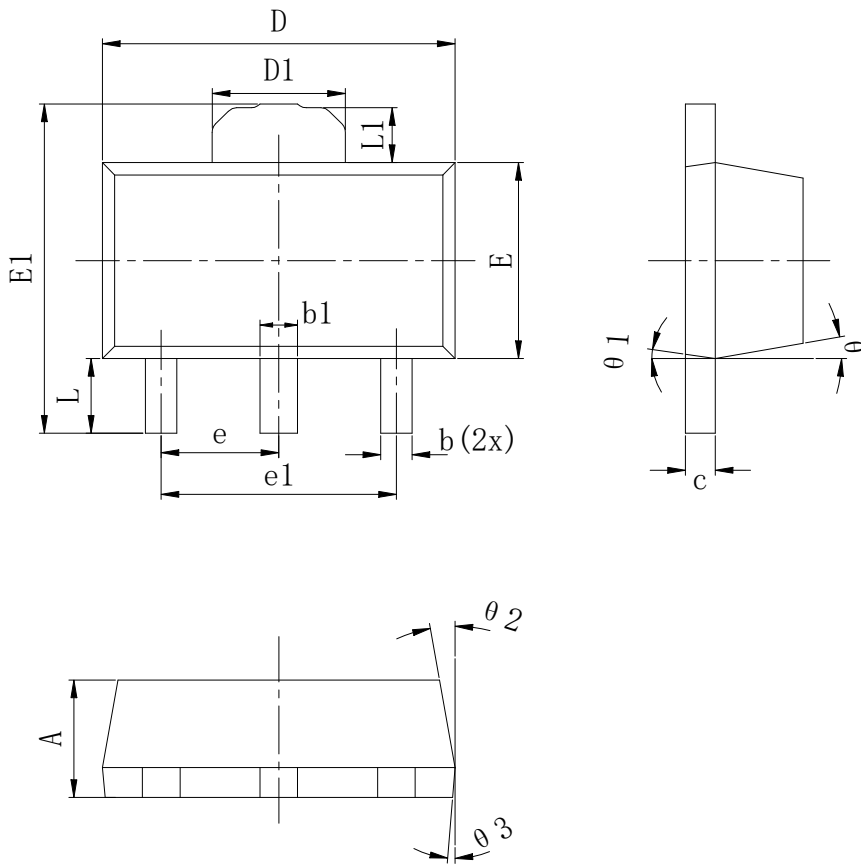


SOT-89-3L Reel



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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