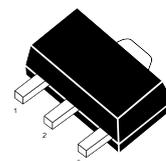


### PNP Silicon Epitaxial Planar Transistor

for high current application

The transistor is subdivided into two groups, O and Y, according to its DC current gain.

SOT-89-3L



1. BASE
2. EMITTER
3. COLLECTOR



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

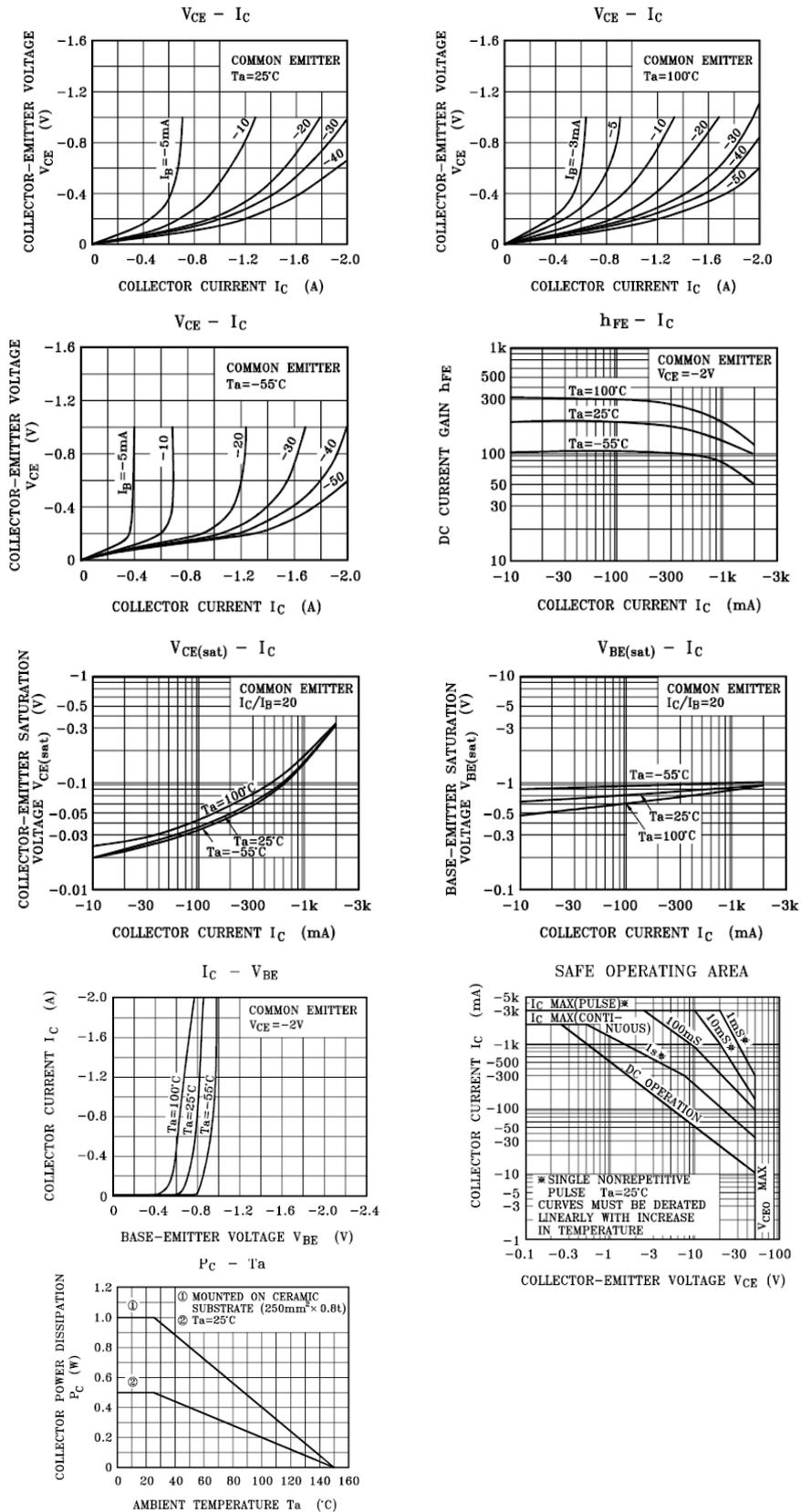
Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	2	A
Base Current	$-I_B$	0.4	A
Total Power Dissipation	$P_{tot}$	0.5 1 <sup>1)</sup>	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

<sup>1)</sup> When mounted on a 250 mm<sup>2</sup> X 0.8 t ceramic substrate.

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

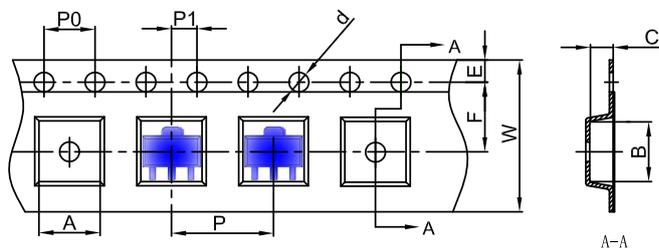
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 2\text{ V}$ , $-I_C = 500\text{ mA}$  at $-V_{CE} = 2\text{ V}$ , $-I_C = 1.5\text{ A}$  Current Gain Group O Y	$h_{FE}$	70	-	140	-
	$h_{FE}$	120	-	240	-
	$h_{FE}$	40	-	-	-
Collector Base Cutoff Current at $-V_{CB} = 50\text{ V}$	$-I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	100	nA
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	50	-	-	V
Collector Emitter Saturation Voltage at $-I_C = 1\text{ A}$ , $-I_B = 50\text{ mA}$	$-V_{CE(sat)}$	-	-	0.5	V
Base Emitter Saturation Voltage at $-I_C = 1\text{ A}$ , $-I_B = 50\text{ mA}$	$-V_{BE(sat)}$	-	-	1.2	V
Transition Frequency at $-V_{CE} = 2\text{ V}$ , $-I_C = 500\text{ mA}$	$f_T$	-	120	-	MHz
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	40	-	pF

## Typical Characteristics



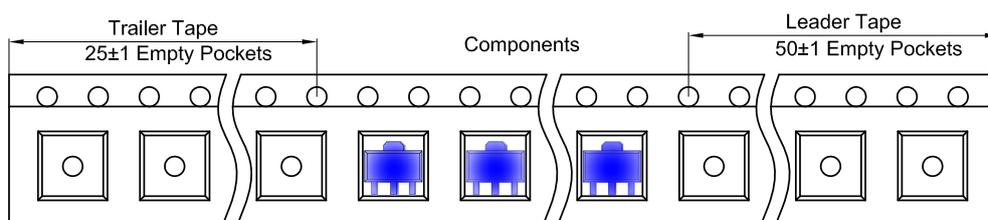
### SOT-89-3L Tape and Reel

#### SOT-89-3L Embossed Carrier Tape

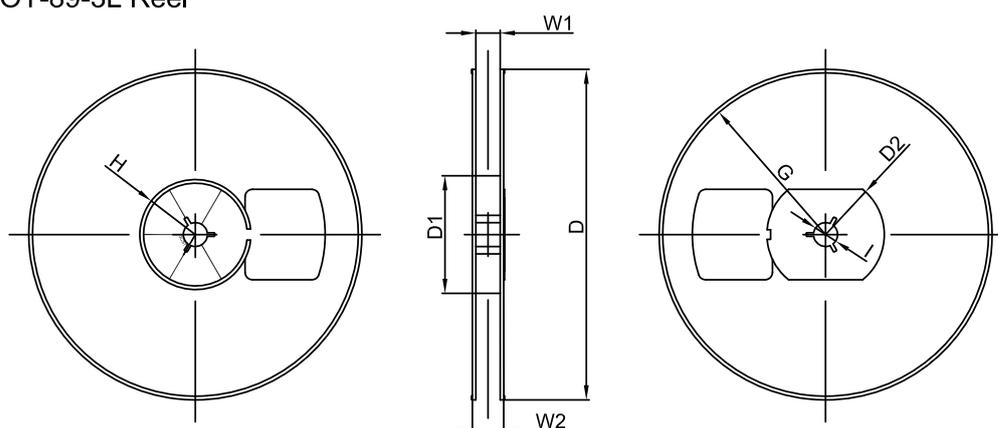


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-89-3L	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

#### SOT-89-3L Tape Leader and Trailer

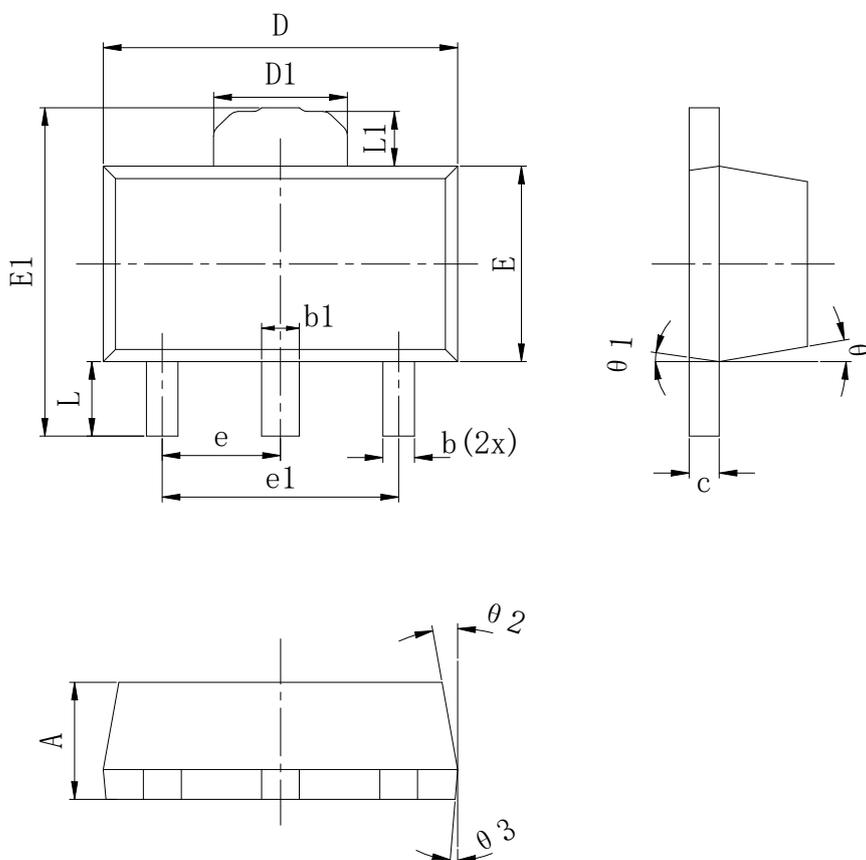


#### SOT-89-3L Reel



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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