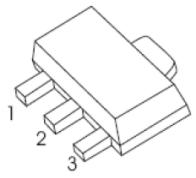
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

AD-CXT5551 Plastic-Encapsulated Transistor

AD-CXT5551 Transistor (NPN)

SOT-89-3L



1. BASE
2. COLLECTOR
3. EMITTER

FEATURES

- Switching and amplification in high voltage applications such as telephony
- Low current (max. 600mA)
- High voltage (max.180V)
- AEC-Q101 qualified

MARKING: $\overline{1}$G6

MAXIMUM RATINGS (T_j = 25°C unless otherwise specified)

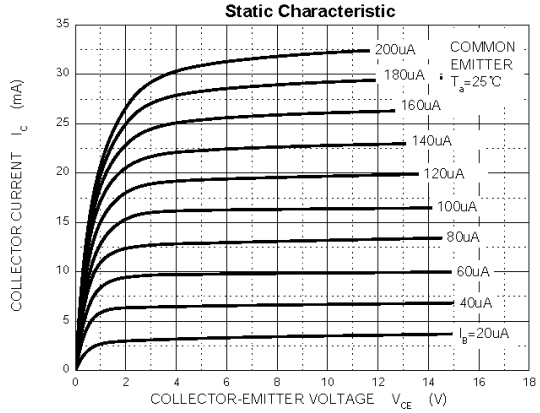
Parameter	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	180	V
Collector-emitter voltage	V_{CEO}	160	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	0.6	A
Collector power dissipation	P_C	500	mW
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_j = 25°C unless otherwise specified)

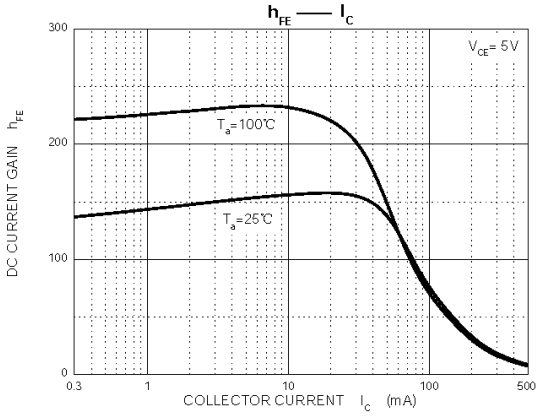
Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C = 100μA, I_E = 0A	180	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0A	160	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 10μA, I_C = 0A	6	-	-	V
Collector-base cut-off current	I_{CBO}	V_{CE} = 120V, I_E = 0A	-	-	50	nA
Collector cut-off current	I_{EBO}	V_{EB} = 4V, I_C = 0A	-	-	50	nA
DC current gain	$h_{FE(1)}$	V_{CE} = 5V, I_C = 1mA	80	-	-	-
	$h_{FE(2)}$	V_{CE} = 5V, I_C = 10mA	100	-	300	-
	$h_{FE(3)}$	V_{CE} = 5V, I_C = 50mA	30	-	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 10mA, I_B = 1mA	-	-	0.15	V
		I_C = 50mA, I_B = 5mA	-	-	0.2	
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 10mA, I_B = 1mA	-	-	1	
		I_C = 50mA, I_B = 5mA	-	-	1	
Noise figure	NF	V_{CE} = 5V,I_C = 0.2mA, f = 10Hz to 15.7KHZ, R_S = 10Ω	-	-	8	dB
Transition frequency	f_T	V_{CE} = 10V, I_C = 10mA, f = 100MHz	100	-	-	MHz
Collector output capacitance	C_{ob}	V_{CB} = 10V, I_E = 0A, f = 1MHz	-	-	6	pF

TYPICAL CHARACTERISTICS

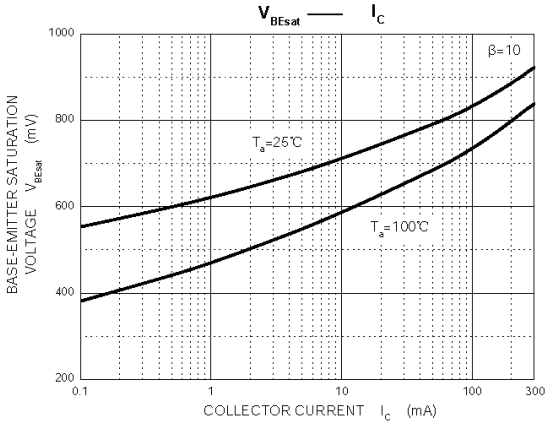
Static Characteristic



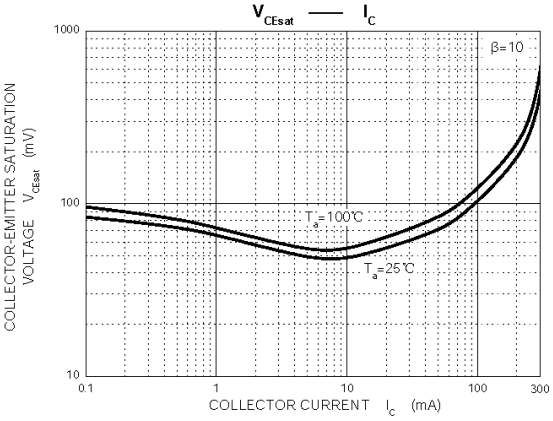
h_{FE} —— I_C



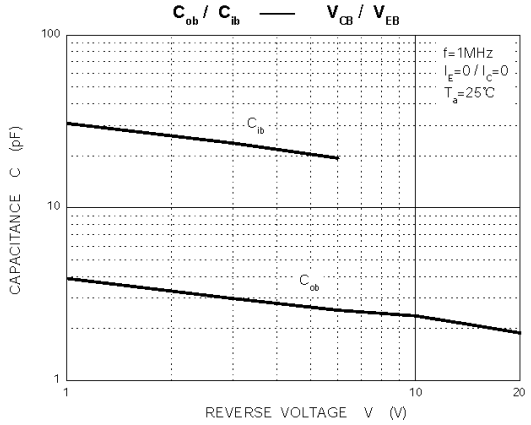
V_{BEsat} —— I_C



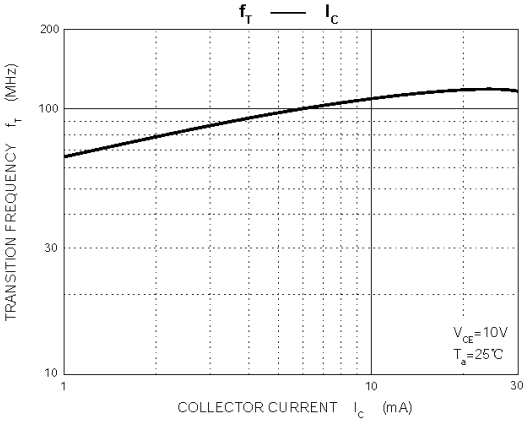
V_{CEsat} —— I_C



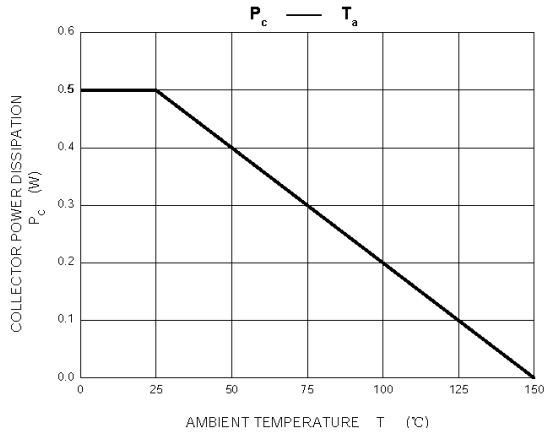
C_{ob} / C_{ib} —— V_{CB} / V_{EB}



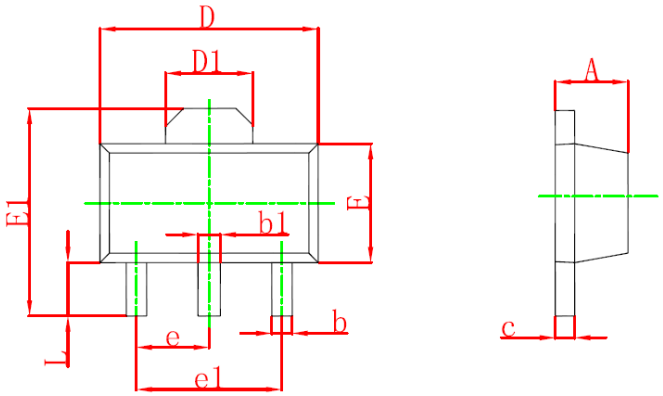
f_T —— I_C



P_c —— T_a

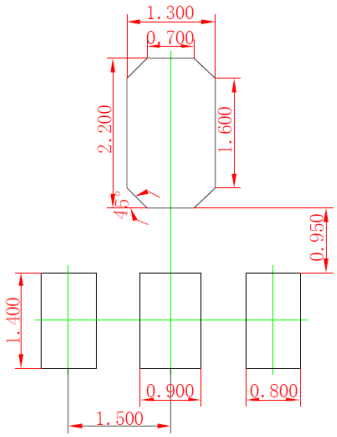


SOT-89-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

SOT-89-3L SUGGESTED PAD LAYOUT



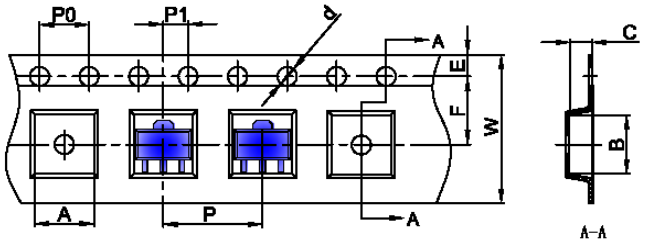
P

Note:

1. Controlling dimension in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purpose only.

SOT-89-3L TAPE AND REEL

SOT-89-3L Embossed Carrier Tape

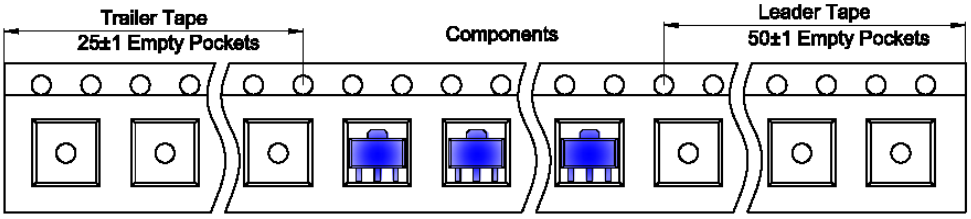


Packaging Description:

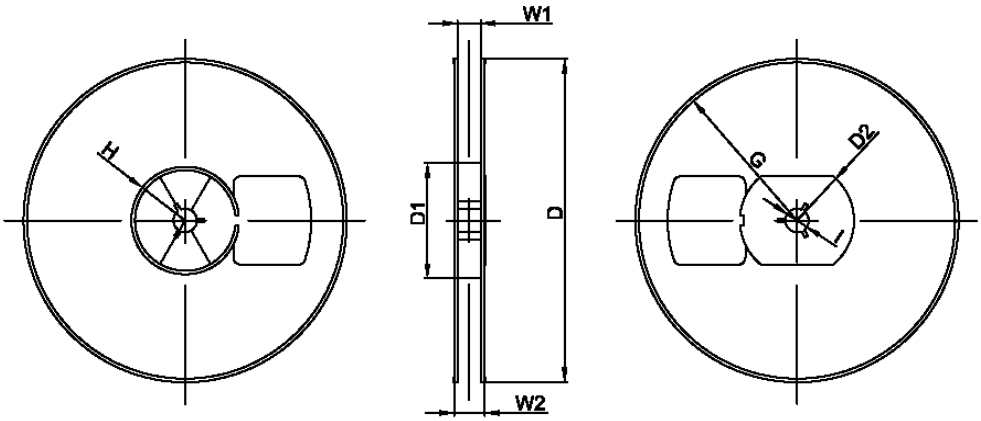
SOT-89-3L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 1,000 units per 7" or 18.0 cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

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	R66.50	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	

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