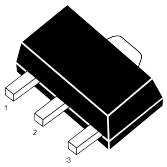
Lastinght

2SB1424U

PNP Silicon Epitaxial Planar Transistor

SOT-89-3L



1. BASE
2. EMITTER
3. COLLECTOR

RoHS COMPLIANT

Pb-Free

Absolute Maximum Ratings (T_a = 25°C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	20	V
Collector Emitter Voltage	$-V_{CEO}$	20	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current - DC Collector Current - Pulse [1)]	$-I_C$ $-I_{CP}$	3 5	A A
Total Power Dissipation	P_{tot}	0.5	W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{Stg}	- 55 to + 150	°C

[1)] Single pulse, PW = 10 ms.

Characteristics at T_a = 25°C

Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 2 V, $-I_C$ = 100 mA	Current Gain Group	Q R	h_{FE} h_{FE}	120 180	- -	270 390	- -
Collector Base Breakdown Voltage at $-I_C$ = 50 µA			$-V_{(BR)CBO}$	20	-	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 1 mA			$-V_{(BR)CEO}$	20	-	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 50 µA			$-V_{(BR)EBO}$	6	-	-	V
Collector Cutoff Current at $-V_{CB}$ = 20 V			$-I_{CBO}$	-	-	0.1	µA
Emitter Cutoff Current at $-V_{EB}$ = 5 V			$-I_{EBO}$	-	-	0.1	µA
Collector Emitter Saturation Voltage at $-I_C$ = 2 A, $-I_B$ = 100 mA			$-V_{CE(sat)}$	-	-	0.5	V
Transition Frequency at $-V_{CE}$ = 2 V, $-I_E$ = 0.5 A, f = 100 MHz			f_T	-	240	-	MHz
Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz			C_{ob}	-	35	-	pF

Typical Characteristics

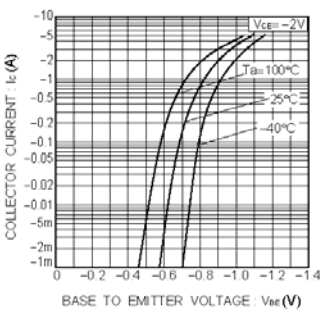


Fig.1 Grounded emitter propagation characteristics

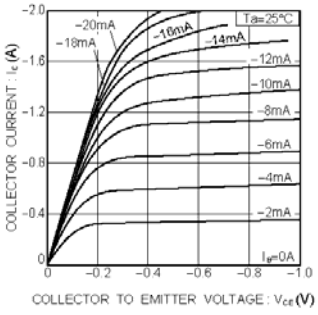


Fig.2 Grounded emitter output characteristics (I)

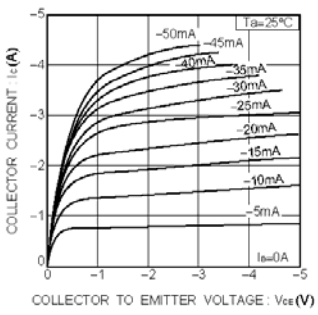


Fig.3 Grounded emitter output characteristics (II)

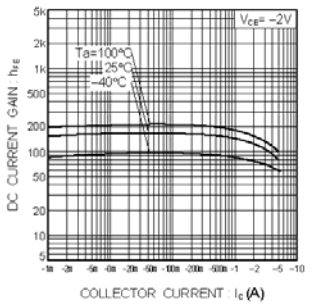


Fig.4 DC current gain vs. collector current

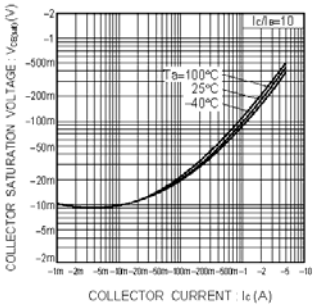


Fig.5 Collector-emitter saturation voltage vs. collector curren (I)

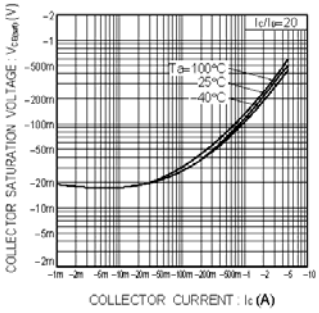


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

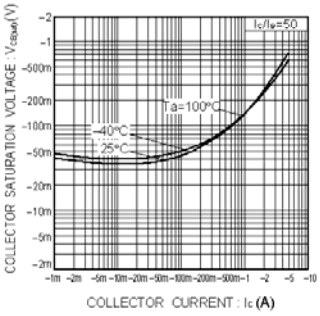


Fig.7 Collector-emitter saturation voltage vs. collector current (III)

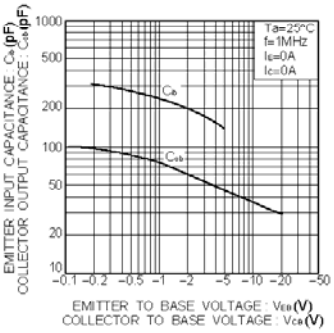


Fig.8 Gain bandwidth product vs. emitter current
Collector output capacitance vs. collector-base voltage

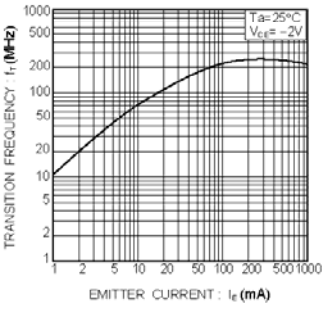
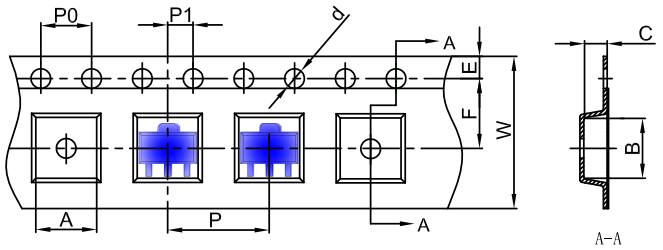


Fig.9 Emitter input capacitance vs. emitter base voltage

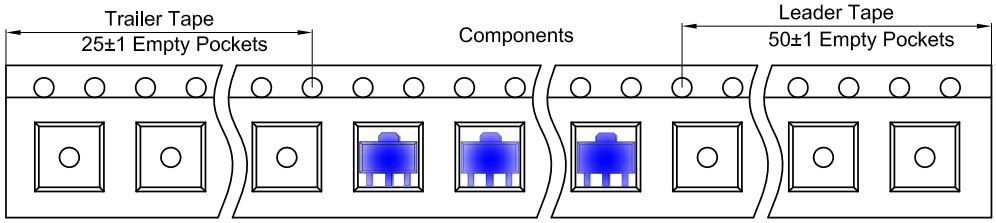
SOT-89-3L Tape and Reel

SOT-89-3L Embossed Carrier Tape

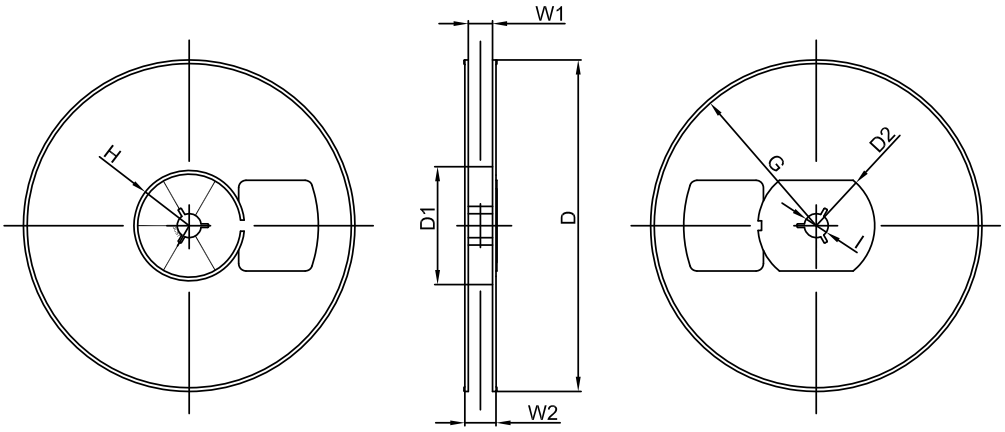


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-89-3L	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

SOT-89-3L Tape Leader and Trailer

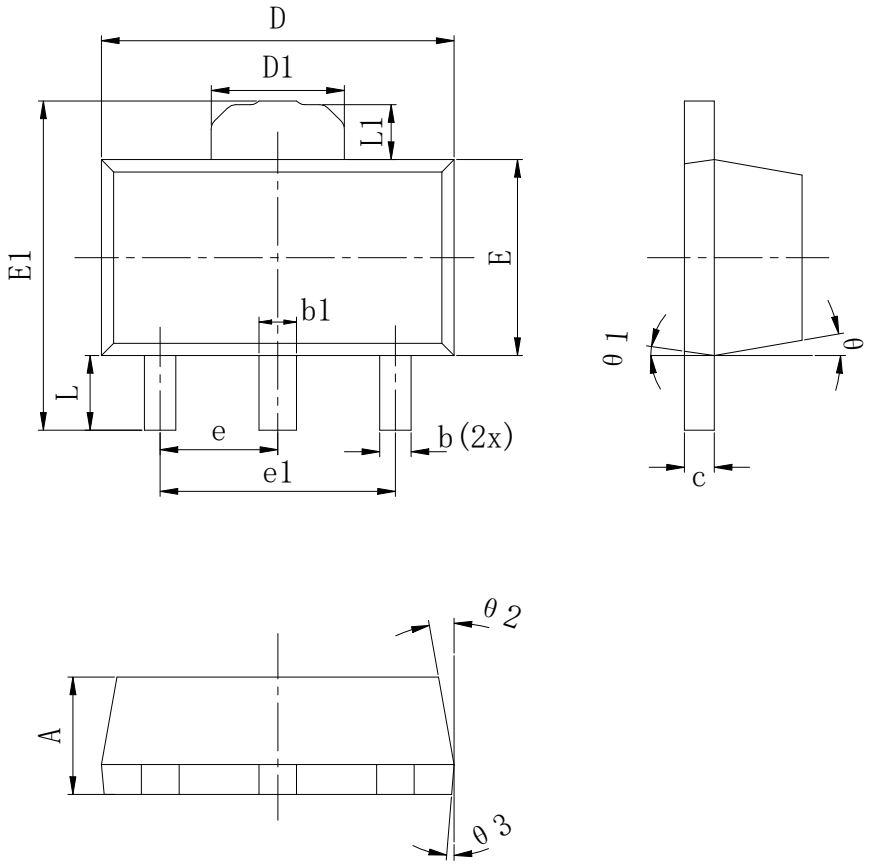


SOT-89-3L Reel



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		
θ1	8° REF		
θ2	10° REF		
θ3	5° REF		

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