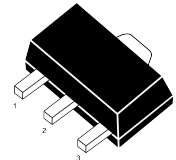


FEATURES

- High Collector to Emitter Voltage : $V_{CEO} > 120 \text{ V}$ (2SD1007)
: $V_{CEO} > 100 \text{ V}$ (2SD1006)
- Complement to PNP type 2SB805, 806 respectively.

SOT-89-3L



1. BASE
2. EMITTER
3. COLLECTOR



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$)

		2SD1006	2SD1007	
Collector to Base Voltage	V_{CBO}	100	120	V
Collector to Emitter Voltage	V_{CEO}	100	120	V
Emitter to Base Voltage	V_{EBO}	5.0		V
Collector Current (DC)	$I_{C(DC)}$	0.7		A
Collector Current (Pulse) *	$I_{C(Pulse)}$	1.2		A
Total Power Dissipation **	P_T	2.0		W
Junction Temperature	T_j	150		$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150		$^\circ\text{C}$

*PW $\leq 10 \text{ ms}$, duty cycle $\leq 50 \%$

**When mounted on ceramic substrate of $16 \text{ cm}^2 \times 0.7 \text{ mm}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

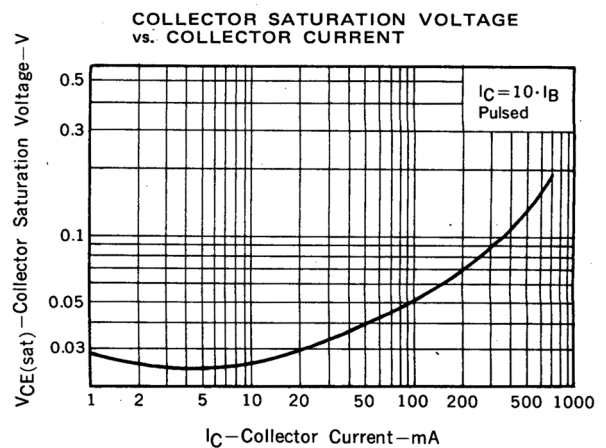
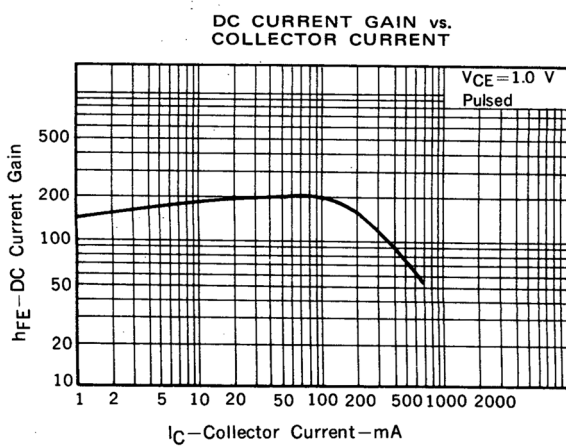
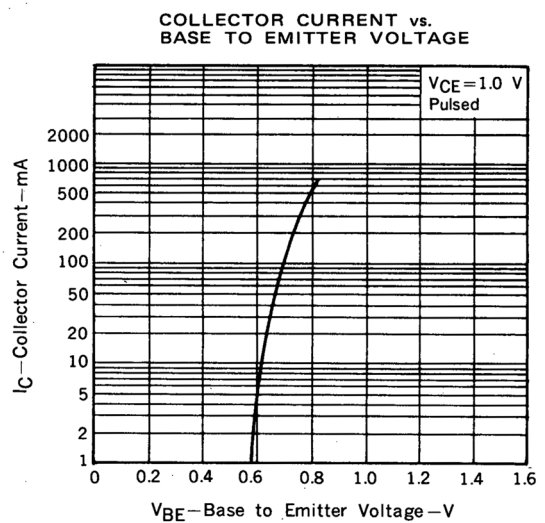
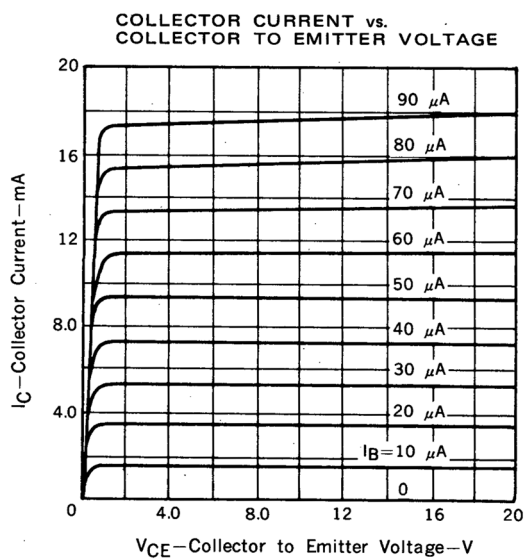
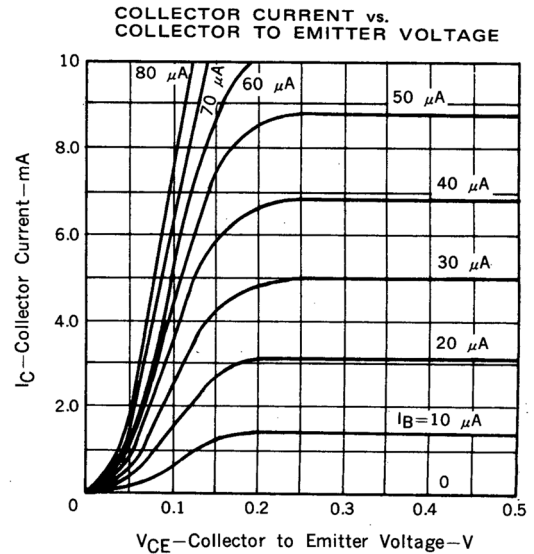
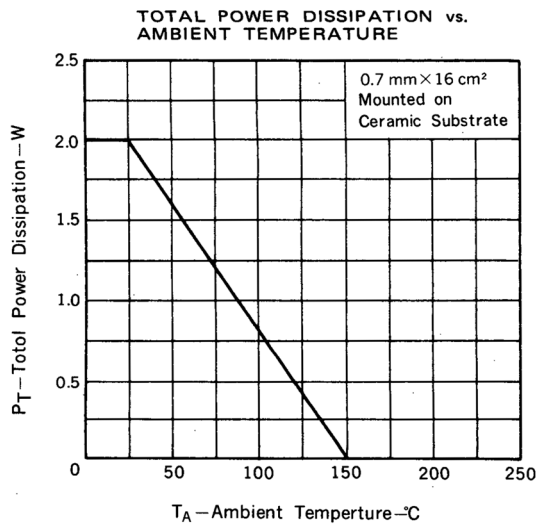
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS	
Collector Cutoff Current	I_{CBO}			100	nA	2SD1006	$V_{CB}=100 \text{ V}, I_E=0$
				100	nA	2SD1007	$V_{CB}=120 \text{ V}, I_E=0$
Emitter Cutoff Current	I_{EBO}			100	nA	$V_{EB}=5.0 \text{ V}, I_C=0$	
DC Current Gain	h_{FE1}	45	200			$V_{CE}=1.0 \text{ V}, I_C=5.0 \text{ mA}$ ***	
DC Current Gain	h_{FE2}	90	200	400		$V_{CE}=1.0 \text{ V}, I_C=100 \text{ mA}$ ***	
Base to Emitter Voltage	V_{BE}	550	620	650	mV	$V_{CE}=10 \text{ V}, I_C=10 \text{ mA}$ ***	
Collector Saturation Voltage	$V_{CE(sat)}$		0.14	0.6	V	$I_C=500 \text{ mA}, I_B=50 \text{ mA}$ ***	
Base Saturation Voltage	$V_{BE(sat)}$		0.88	1.5	V	$I_C=500 \text{ mA}, I_B=50 \text{ mA}$ ***	
Output Capacitance	C_{ob}		10		pF	$V_{CB}=10 \text{ V}, I_E=0, f=1.0 \text{ MHz}$	
Gain Bandwidth Product	f_T		90		MHz	$V_{CE}=10 \text{ V}, I_E=-10 \text{ mA}$	

***Pulsed: PW $\leq 350 \mu\text{s}$, duty cycle $\leq 2 \%$

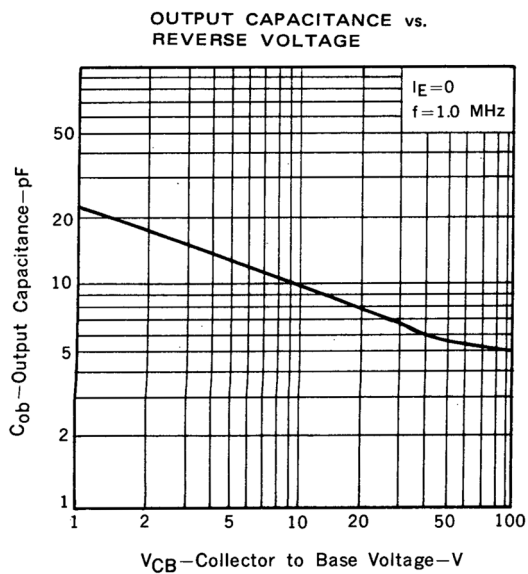
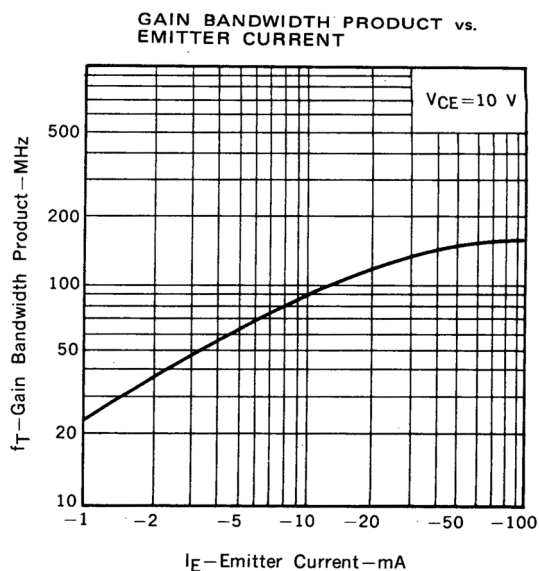
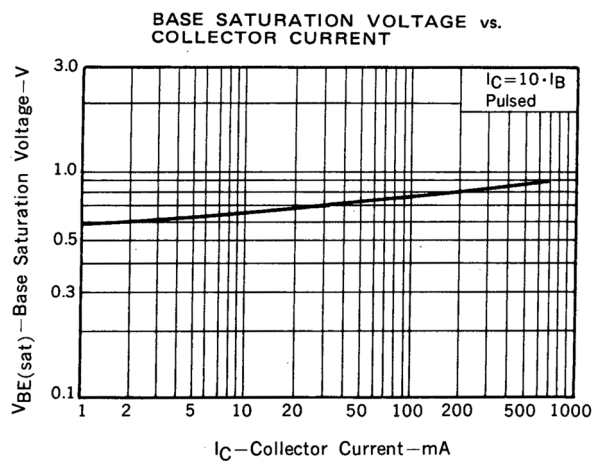
h_{FE} Classification

MARKING	2SD1006	HM	HL	HK
	2SD1007	HR	HQ	HP
h_{FE2}		90 – 180	135 – 270	200 – 400

Typical Characteristics

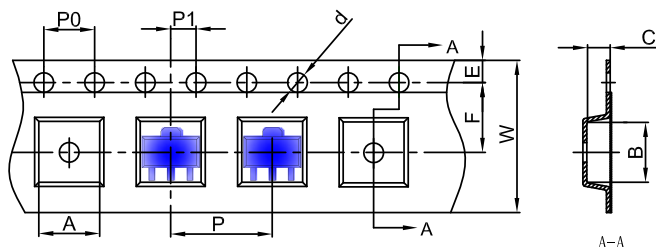


Typical Characteristics



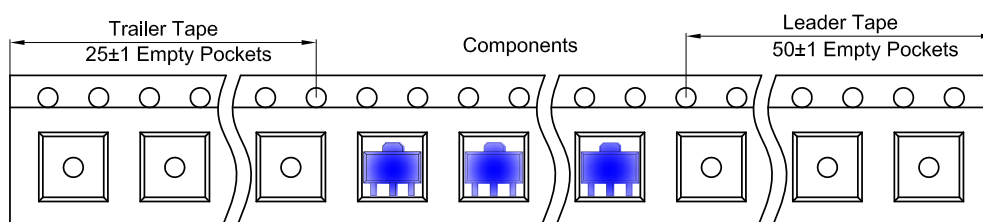
SOT-89-3L Tape and Reel

SOT-89-3L Embossed Carrier Tape

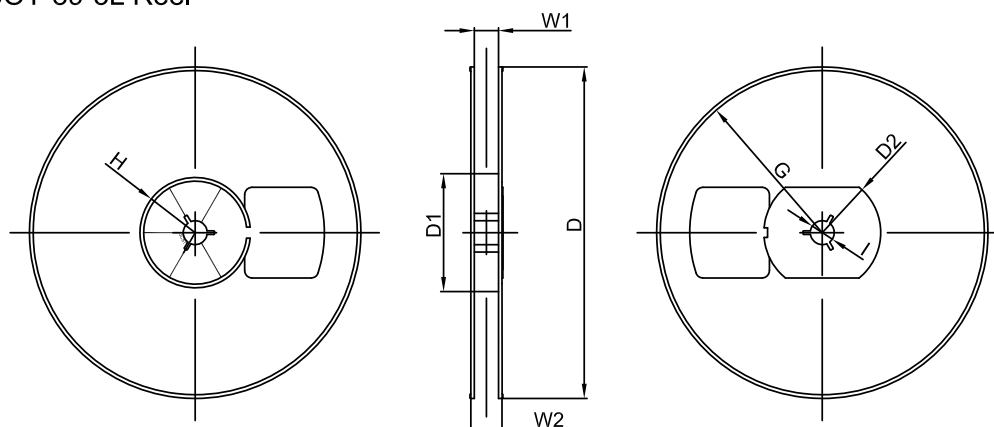


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-89-3L	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

SOT-89-3L Tape Leader and Trailer

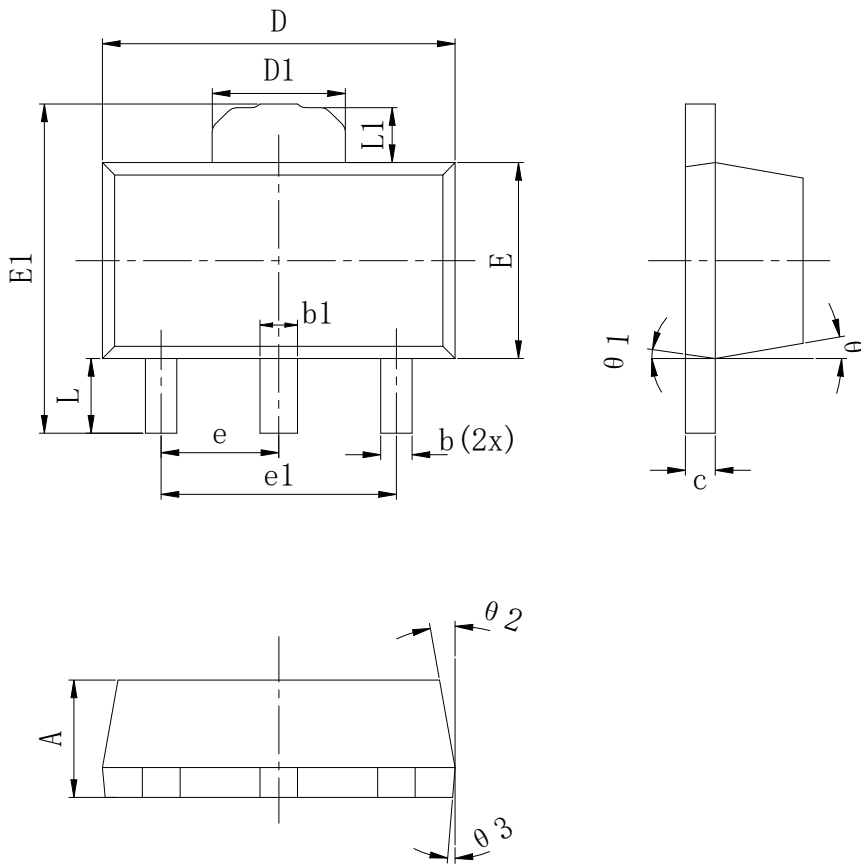


SOT-89-3L Reel



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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