

TO-92L Plastic-Encapsulate Transistors

2SD667, 2SD667A TRANSISTOR (NPN)

FEATURES

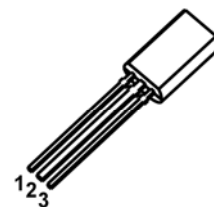
- Low Frequency Power Amplifier
- Complementary Pair with 2SB647/A

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector- Base Voltage	120	V
V _{CEO}	Collector-Emitter Voltage	2SD667	80
		2SD667A	100
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	1	A
P _C	Collector Power Dissipation	900	mW
R _{θJA}	Thermal Resistance Junction to Ambient	139	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

TO-92L

1. EMITTER
2. COLLECTOR
3. BASE



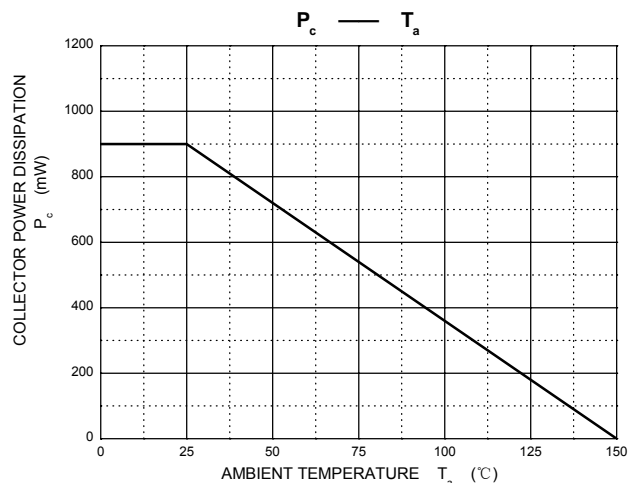
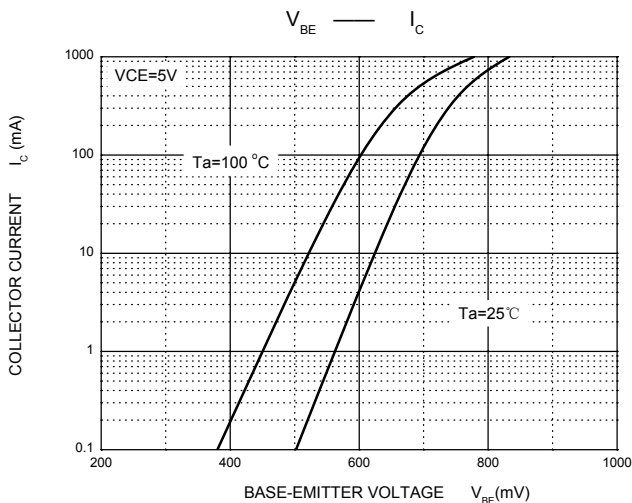
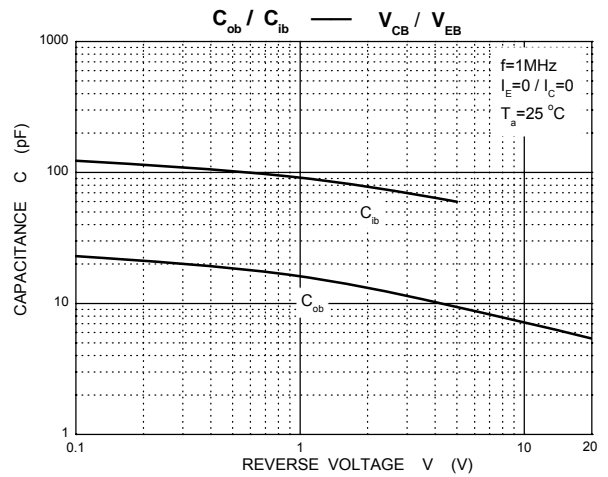
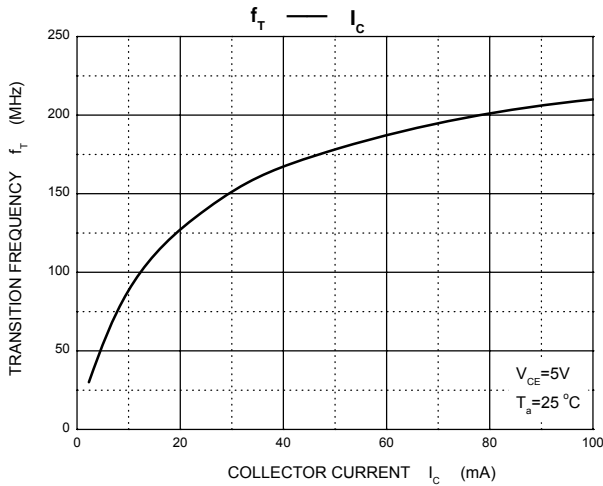
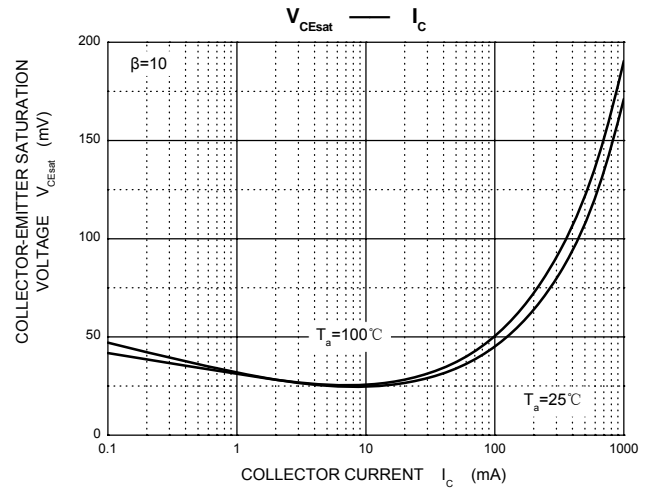
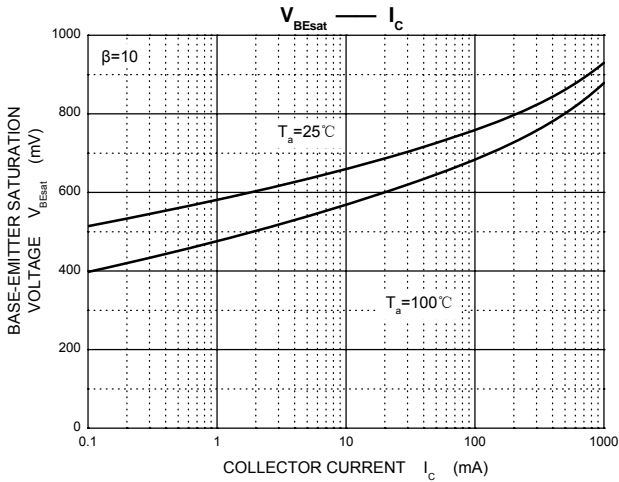
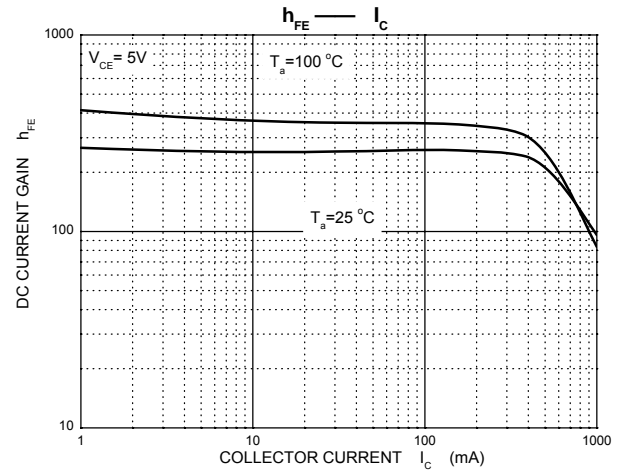
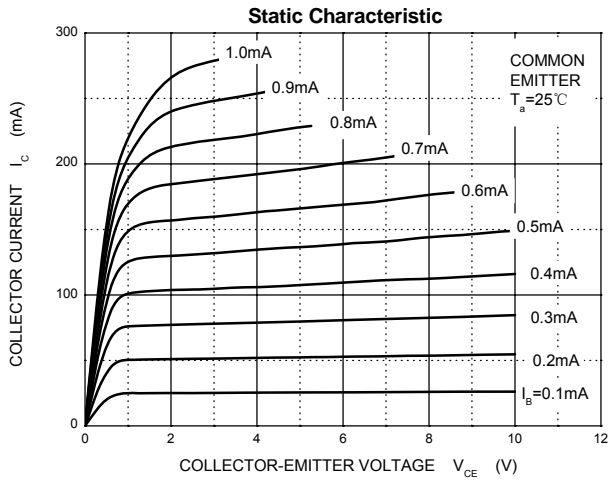
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =10μA, I _E =0	120			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	2SD667	80		V
			2SD667A	100		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =100V, I _E =0			10	μA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0			10	μA
DC current gain	h _{FE(1)}	V _{CE} =5V, I _C =150mA	2SD667	60		320
			2SD667A	60		320
	h _{FE(2)}	V _{CE} =5V, I _C =500mA	30			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500mA, I _B =50mA			1	V
Base-emitter voltage	V _{BE}	V _{CE} =5V, I _C =150mA			1.5	V
Transition frequency	f _T	V _{CE} =5V, I _C =150mA		140		MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz		12		pF

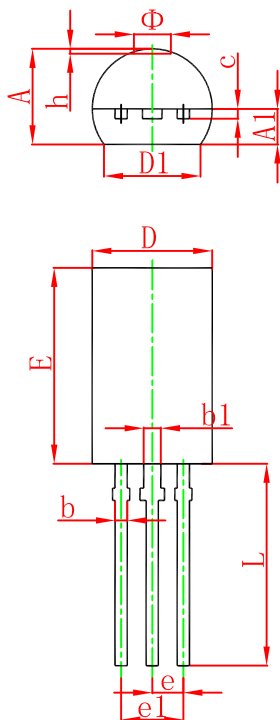
CLASSIFICATION OF h_{FE(1)}

Rank		B	C	D
Range	2SD667	60-120	100-200	160-320
	2SD667A	60-120	100-200	160-320

Typical Characteristics

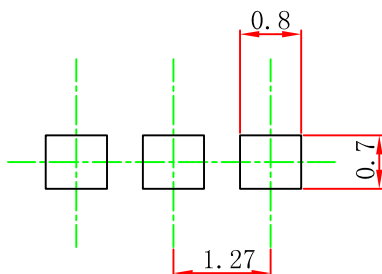


TO-92L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.700	4.100	0.146	0.161
A1	1.280	1.580	0.050	0.062
b	0.350	0.550	0.014	0.022
b1	0.600	0.800	0.024	0.031
c	0.350	0.450	0.014	0.018
D	4.700	5.100	0.185	0.201
D1	4.000		0.157	
E	7.800	8.200	0.307	0.323
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	13.800	14.200	0.543	0.559
Φ		1.600		0.063
h	0.000	0.300	0.000	0.012

TO-92L Suggested Pad Layout



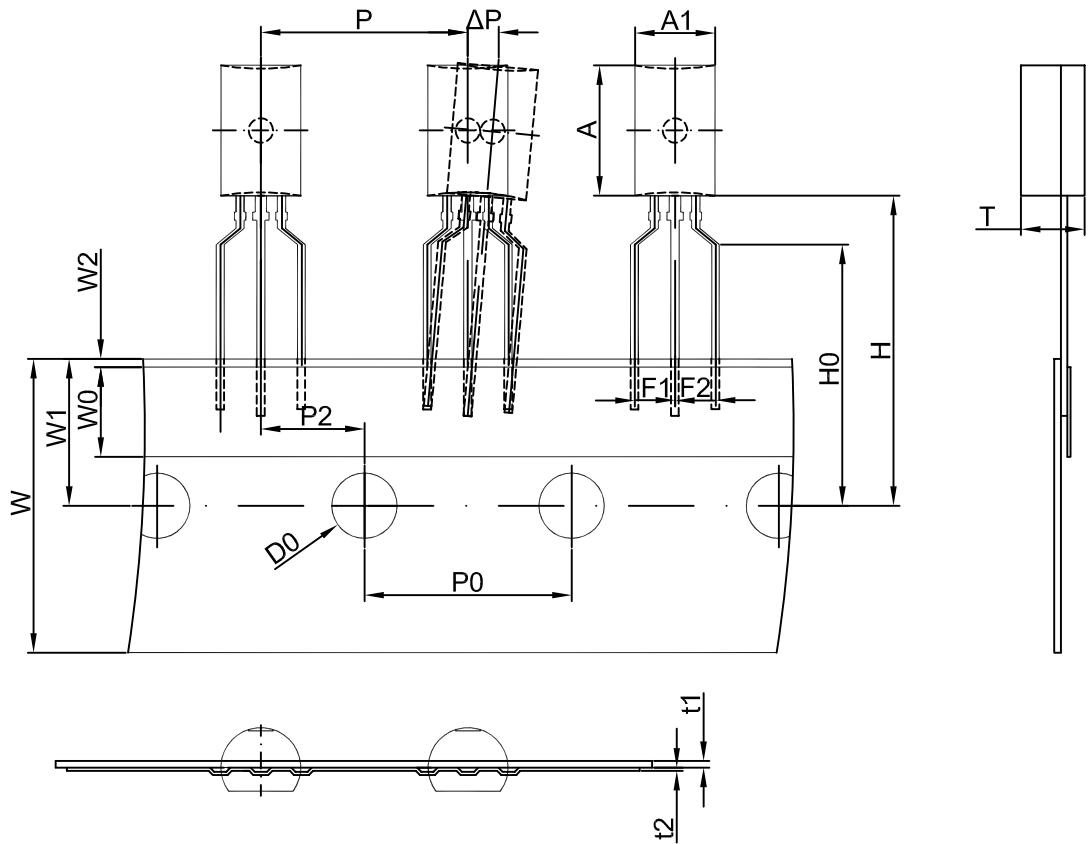
Note:

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

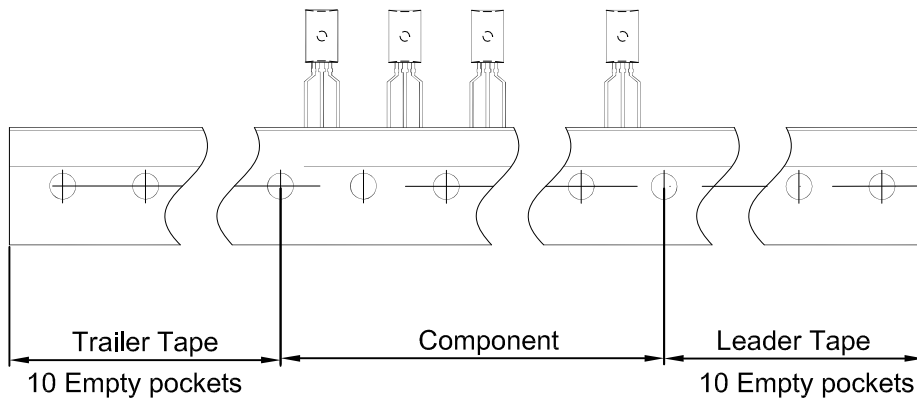
NOTICE

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TO-92L PACKAGE TAPEING DIMENSION



Dimensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.9±0.2	8.0±0.2	3.9±0.2	12.7±0.3	12.7±0.2	6.35±0.3	2.5±0.3	2.5±0.3	18.0+1.0/-0.5
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0±0.5	9.0±0.5	1.0 MAX.	19.0+2.0/-0	16.0±0.5	4.0±0.2	0.4±0.05	0.2±0.05	0 ± 1.0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92L	2000 pcs	333×203×42	20,000 pcs	493×400×264