

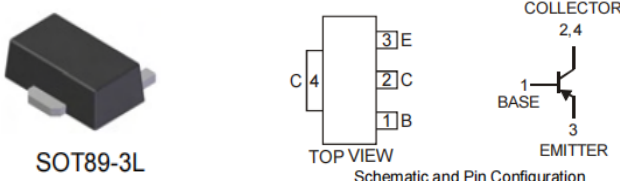
Silicon PNP Epitaxial Planer Low Frequency Power Amplifier

Features

- Small size package: SOT89-3L
- Large Maximum current: $I_C = -1\text{ A}$
- Low collector to emitter saturation voltage: $V_{CE(sat)} = -0.3\text{ V max. (at } I_C/I_B = -0.5\text{ A/-}0.05\text{ A)}$
- High power dissipation: $P_C = 1\text{ W}$
- Complementary pair with DXT651

Outline

(Package name: SOT89-3L)



The image shows a 3D perspective view of the SOT89-3L package, a top view showing pin 4 (C) on the left and pins 3 (E), 2 (C), and 1 (B) on the right, and a schematic diagram of a PNP transistor with collector (2,4), base (1), and emitter (3) terminals.

SOT89-3L

TOP VIEW

Schematic and Pin Configuration

Note: Marking is "KP2".

Absolute Maximum Ratings

($T_a = 25^\circ\text{C}$)

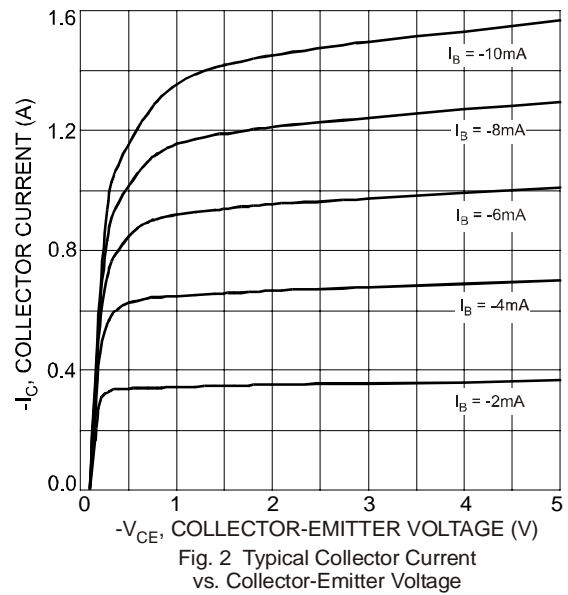
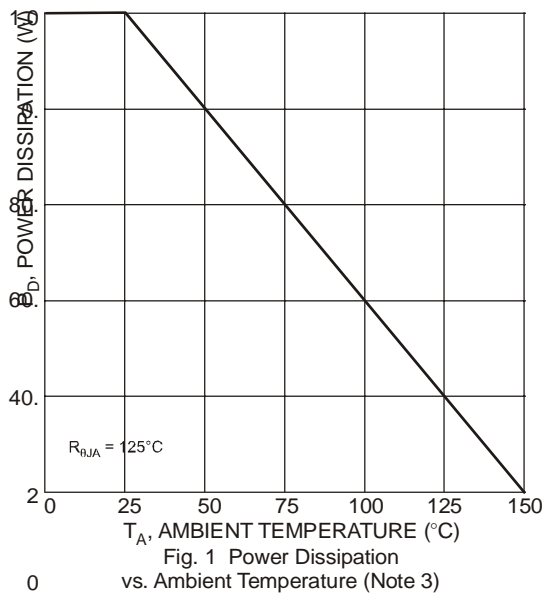
Item	Symbol	Ratings	Unit
Collector to base Voltage	V_{CBO}	-80	V
Collector to emitter voltage	V_{CEO}	-60	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	I_C	-3	A
Collector peak current	$i_c(\text{peak})$	-6	A
Collector power dissipation	P_C	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Notes: 1. No purposefully added lead.

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Collector to base breakdown voltage	$V_{(BR)CBO}$	-80	—	—	V	$I_C = -100\mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-60	—	—	V	$I_C = -10mA, I_B = 0$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -100\mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-0.1	μA	$V_{CB} = -60V, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	-0.1	μA	$V_{EB} = -4V, I_C = 0$
DC current transfer ratio	h_{FE}	100	180	300	—	$V_{CE} = -2V, I_C = -50mA$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	-0.2	-0.3	V	$I_C = -1A, I_B = -100mA$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	-0.9	-1.25	V	$I_C = -1A, I_B = -100mA$
Gain bandwidth product	f_T	100	145	—	MHz	$V_{CE} = -10V, I_C = -50mA, f = 100MHz$
Collector output capacitance	C_{ob}	—	—	30	pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$



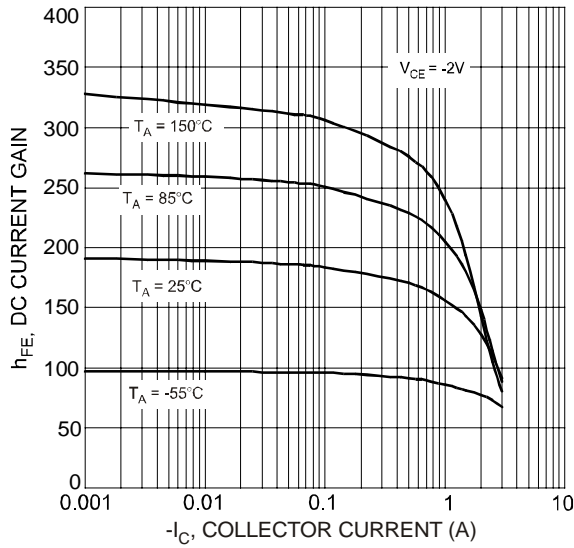


Fig. 3 Typical DC Current Gain vs. Collector Current

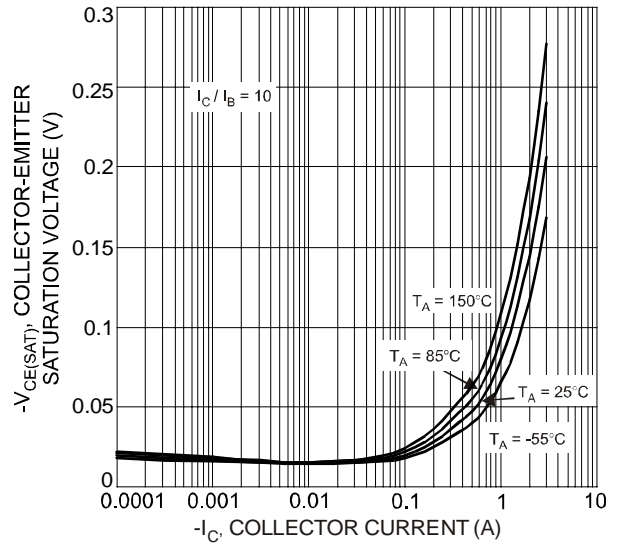


Fig. 4 Typical Collector-Emitter Saturation Voltage vs. Collector Current

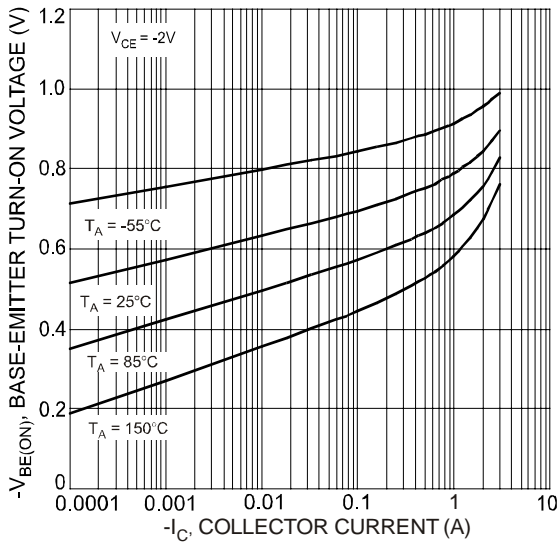


Fig. 5 Typical Base-Emitter Turn-On Voltage vs. Collector Current

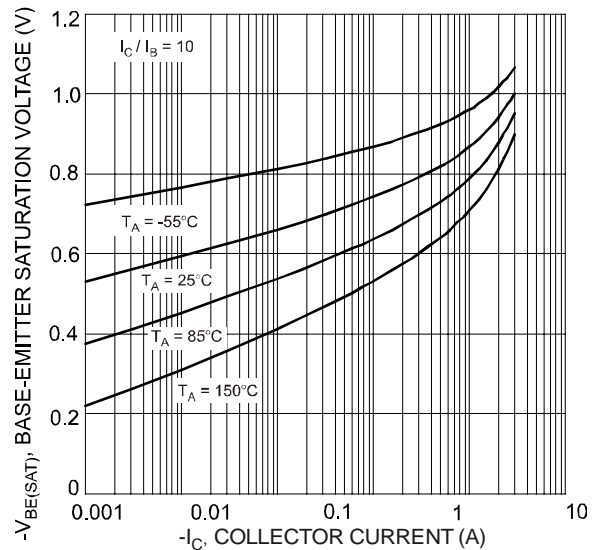


Fig. 6 Typical Base-Emitter Saturation Voltage vs. Collector Current

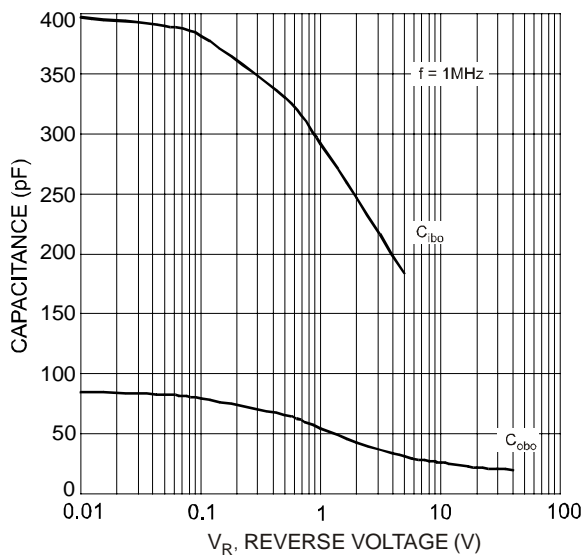


Fig. 7 Typical Capacitance Characteristics

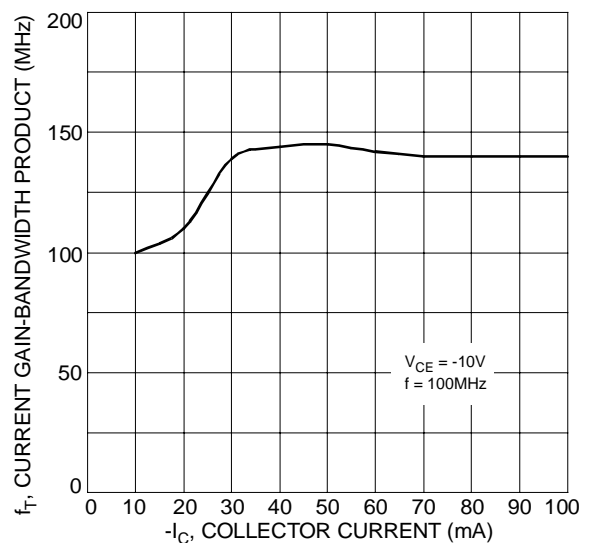
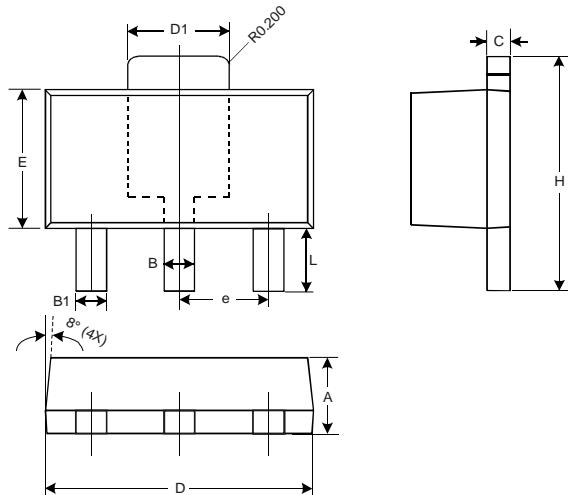


Fig. 8 Typical Gain-Bandwidth Product vs. Collector Current

Ordering Information (Note 5)

Device	Packaging	Shipping
DXT751	SOT89-3L	2500/Tape & Reel

Package Outline Dimensions



SOT89-3L			
Dim	Min	Max	Typ
A	1.40	1.60	1.50
B	0.45	0.55	0.50
B1	0.37	0.47	0.42
C	0.35	0.43	0.38
D	4.40	4.60	4.50
D1	1.50	1.70	1.60
E	2.40	2.60	2.50
e	—	—	1.50
H	3.95	4.25	4.10
L	0.90	1.20	1.05
All Dimensions in mm			

Suggested Pad Layout

