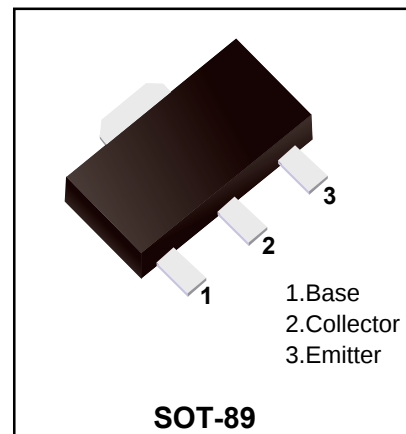


Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

FEATURES

◆Low Frequency Power Amplifier Complementary Pair
with 2SD669SI/2SD669ASI



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

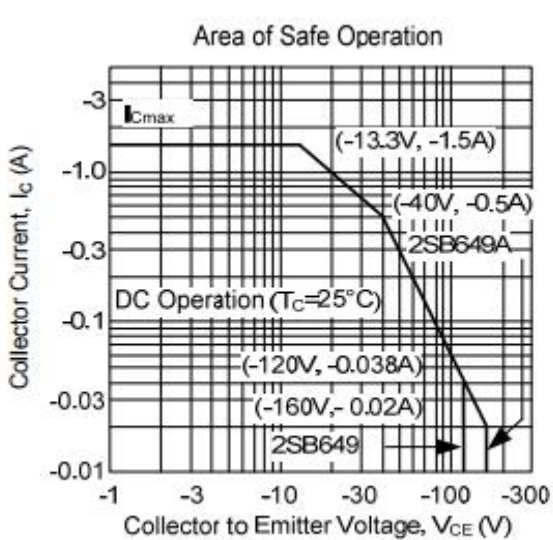
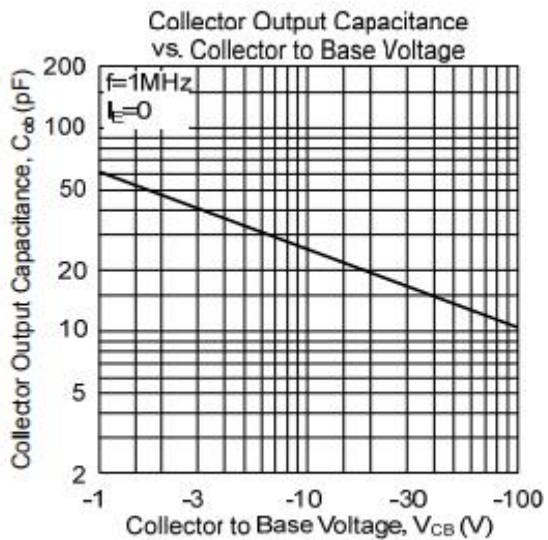
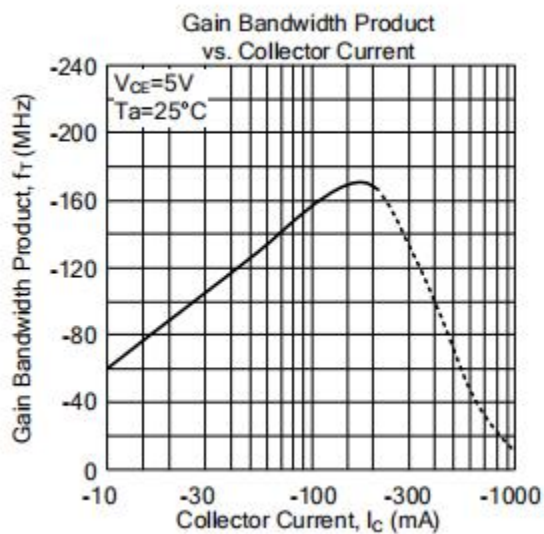
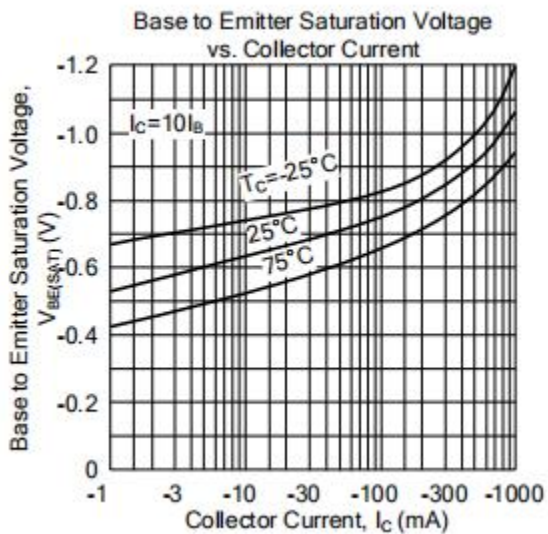
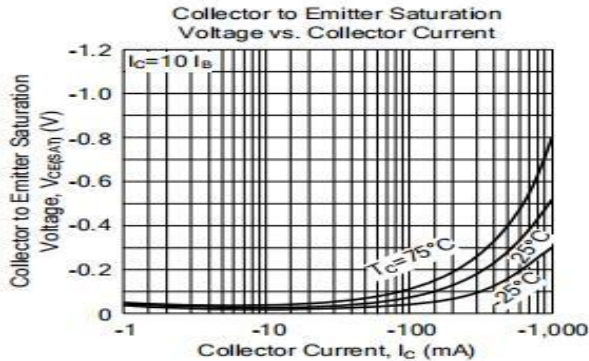
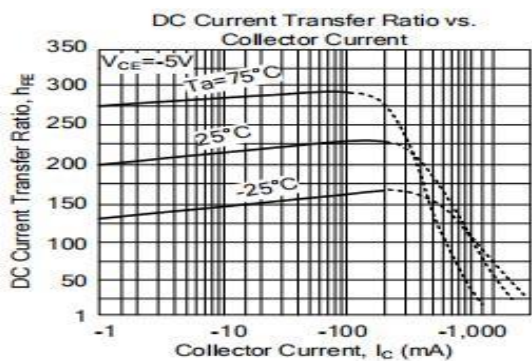
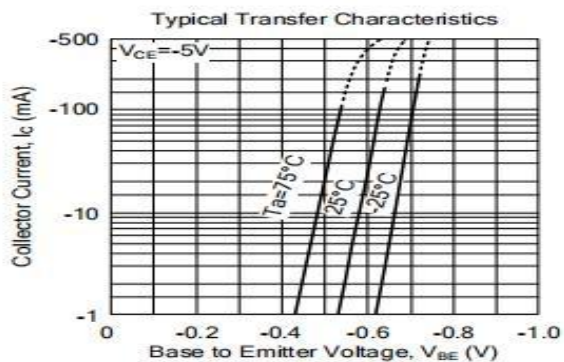
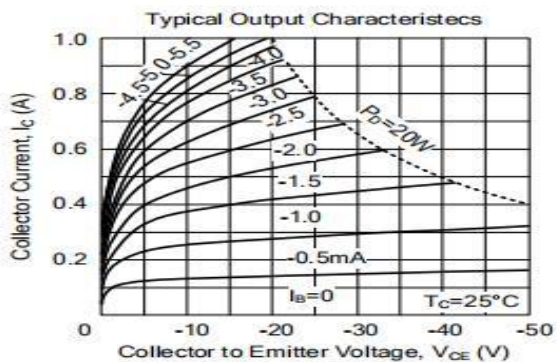
Parameter	Symbol	Value	Unit
Collector- Base Voltage	V_{CBO}	-180	V
Collector-Emitter Voltage	2SB649SI	-120	V
	2SB649ASI	-160	
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	-1.5	A
Collector Dissipation	P_C	1	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55-150	°C

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

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Collector-base breakdown voltage	$I_C = -1mA, I_E = 0$	$V_{(BR)CBO}$	-180			V
Collector-emitter breakdown voltage	$I_C = -10mA, I_B = 0$	2SB649SI	-120			V
		2SB649ASI	-160			
Emitter-base breakdown voltage	$I_E = -1mA, I_C = 0$	$V_{(BR)EBO}$	-5			V
Collector cut-off current	$V_{CB} = -160V, I_E = 0$	I_{CBO}			-10	μA
Emitter cut-off current	$V_{EB} = -4V, I_C = 0$	I_{EBO}			-10	μA
DC current gain	$V_{CE} = -5V, I_C = -150mA$	2SB649	60		320	
		2SB649A	60		320	
	$V_{CE} = -5V, I_C = -500mA$	$h_{FE(2)}$	30			
Collector-emitter saturation voltage	$I_C = -500mA, I_B = -50mA$	$V_{CE(sat)}$			-1	V
Base-emitter voltage	$V_{CE} = -5V, I_C = -150mA$	V_{BE}			-1.5	V
Transition frequency	$V_{CE} = -5V, I_C = -150mA$	f_T		140		MHz
Collector output capacitance	$V_{CB} = -10V, I_E = 0, f = 1MHz$	C_{ob}		27		pF

CLASSIFICATION OF $h_{FE(1)}$

Rank	2SB649SI-B	2SB649SI-C	2SB649SI-D	2SB649ASI-B	2SB649ASI-C	2SB649ASI-D
Range	60-120	100-200	160-320	60-120	100-200	160-320
Marking	B649 B	B649 C	B649 D	B649A B	B649A C	B649A D



Ordering information

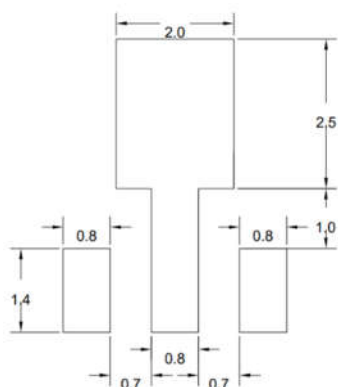
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-89

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
b	0.32	0.52	0.013	0.020
b1	0.38	0.58	0.015	0.023
c	0.35	0.45	0.014	0.018
D	4.40	4.60	0.173	0.181
D1	1.45	1.65	0.057	0.065
D2	1.70	1.80	0.067	0.071
E	2.30	2.60	0.091	0.102
E1	3.95	4.25	0.156	0.167
E2	1.80	2.00	0.071	0.079
e	1.40	1.60	0.055	0.063
e1	2.80	3.20	0.110	0.126
L	0.90	1.20	0.035	0.047

The recommended mounting pad size



UNIT:MM

Disclaimer

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