

2SB1101, 2SB1102

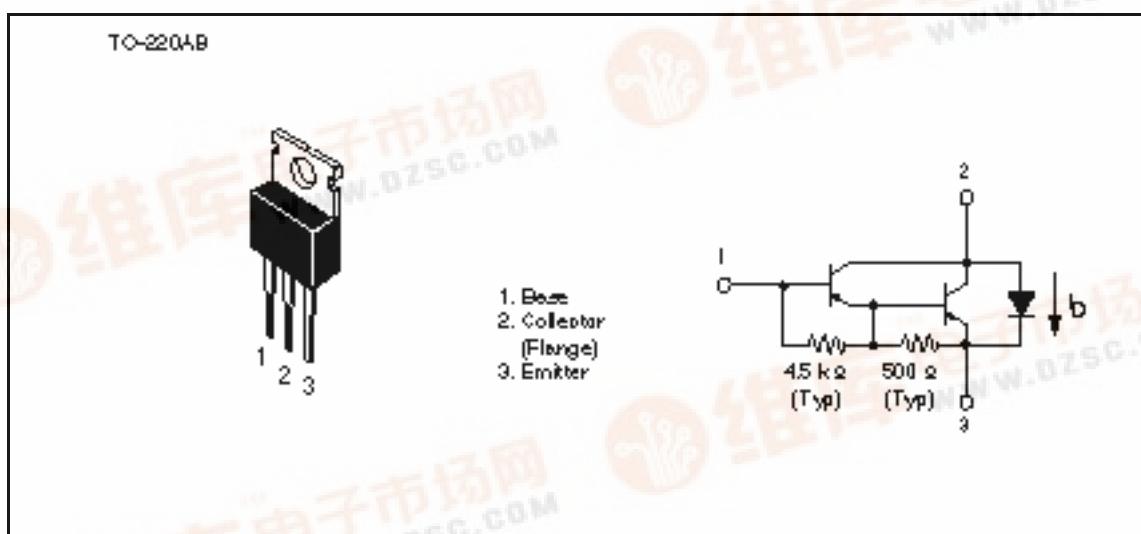
Silicon PNP Triple Diffused

HITACHI

Application

Low frequency power amplifier

Outline



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Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings			Unit
		2SB1101	2SB1102		
Collector to base voltage	V _{CBO}	-60	-80		V
Collector to emitter voltage	V _{CEO}	-60	-80		V
Emitter to base voltage	V _{EBO}	-7	-7		V
Collector current	I _C	-4	-4		A
Collector peak current	I _{C(peak)}	-8	-8		A
Collector power dissipation	P _C ^{*1}	40	40		W
Junction temperature	T _j	150	150		°C
Storage temperature	T _{stg}	-55 to +150	-55 to +150		°C
C to E diode forward current	I _D ^{*1}	4	4		A

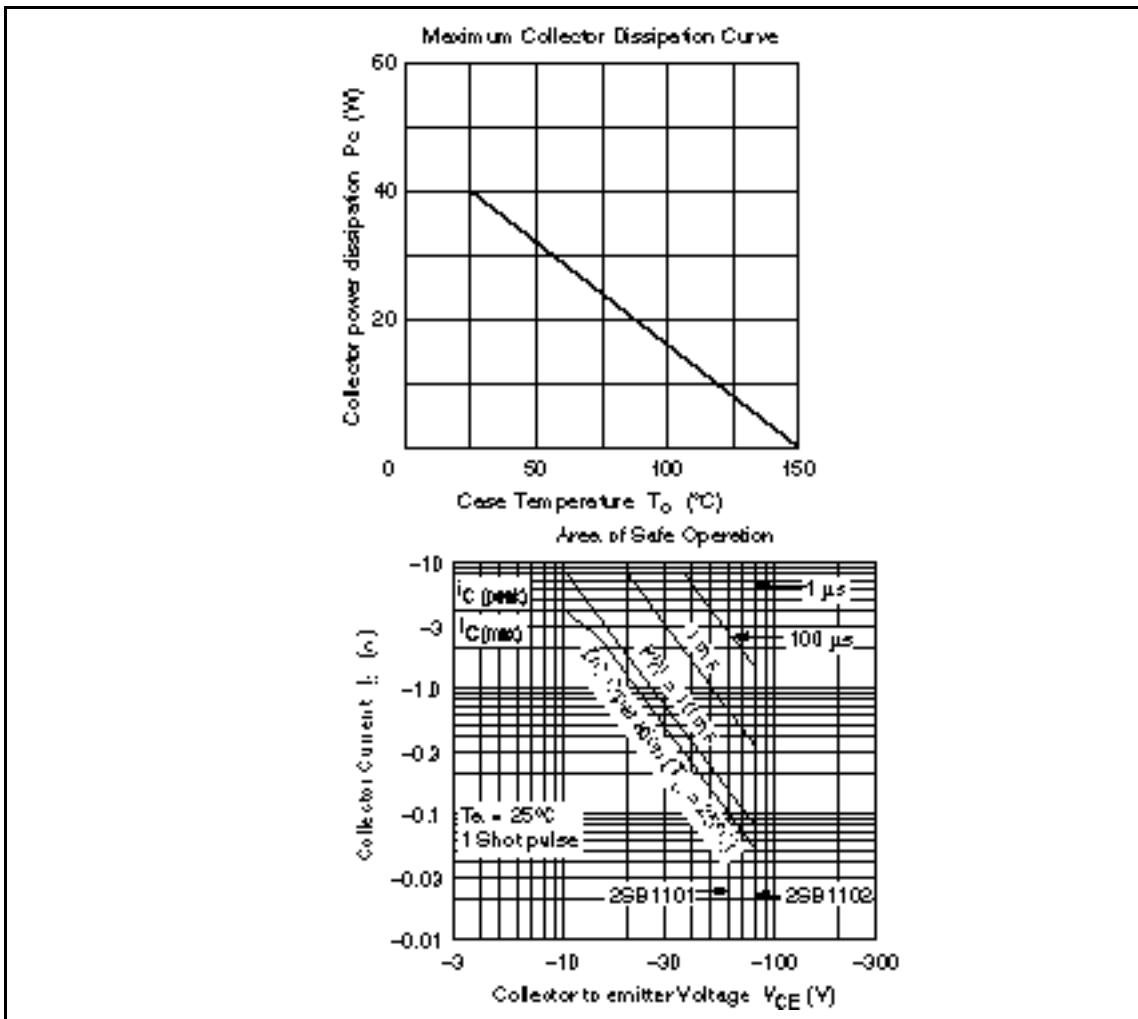
Note: 1. Value at T_C = 25°C.

Electrical Characteristics (Ta = 25°C)

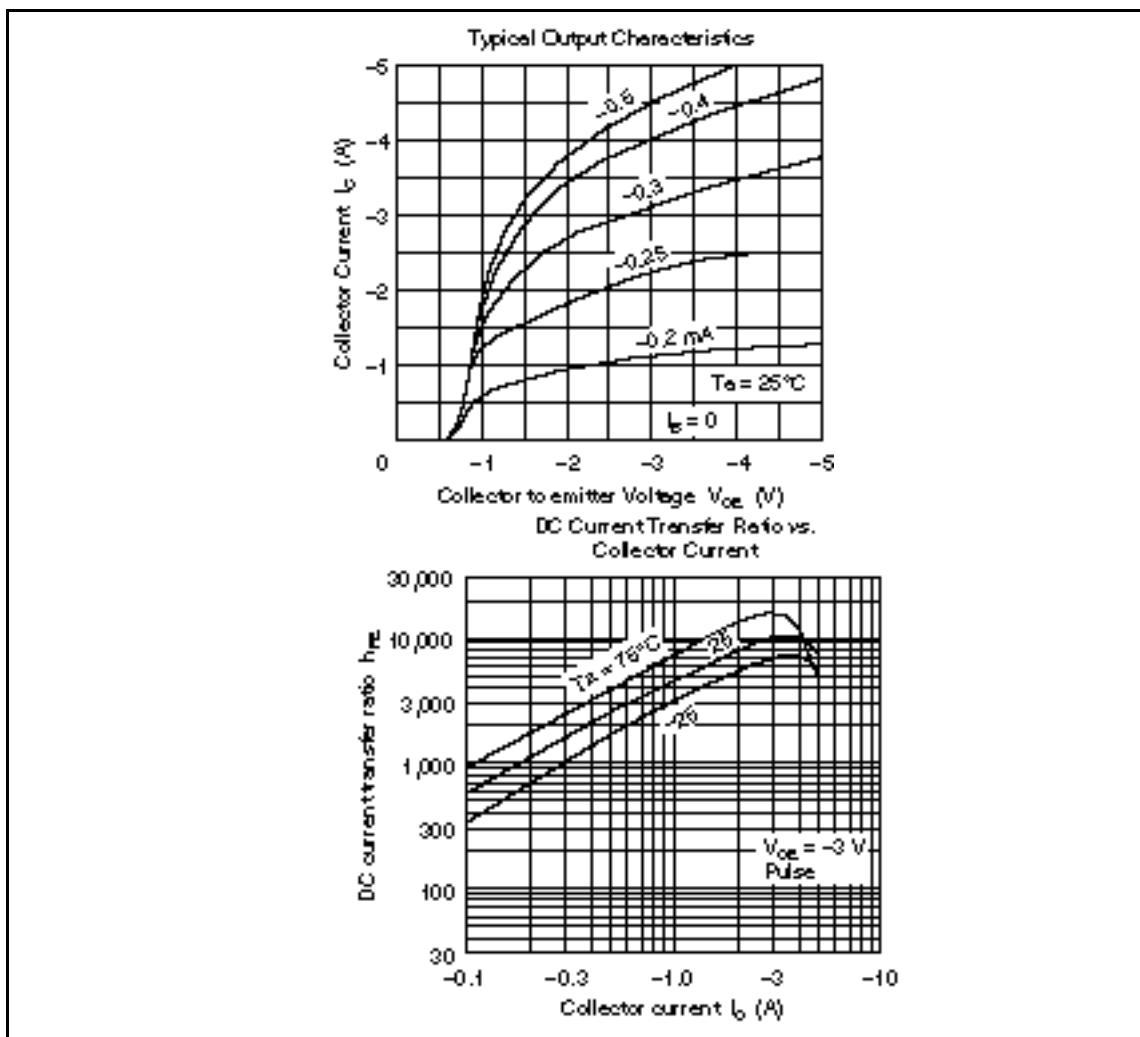
Item	Symbol	2SB1101			2SB1102			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max		
Collector to emitter breakdown voltage	V _{(BR)CEO}	-60	—	—	-80	—	—	V	I _C = -25 mA, R _{BE} =
Emitter to base breakdown voltage	V _{(BR)EBO}	-7	—	—	-7	—	—	V	I _E = -50 mA, I _C = 0
Collector cutoff current	I _{CBO}	—	—	-100	—	—	-100	μA	V _{CB} = -60 V, I _E = 0
	I _{CEO}	—	—	-10	—	—	-10	μA	V _{CE} = -50 V, R _{BE} =
DC current transfer ratio	h _{FE}	1000	—	20000	1000	—	20000	V	V _{CE} = -3 V, I _C = -2 A ^{*1}
Collector to emitter saturation voltage	V _{CE(sat)1}	—	—	-1.5	—	—	-1.5	V	I _C = -2 A, I _B = -4 mA ^{*1}
	V _{CE(sat)2}	—	—	-3.0	—	—	-3.0		I _C = -4 A, I _B = -40 mA ^{*1}
Base to emitter saturation voltage	V _{BE(sat)1}	—	—	-2.0	—	—	-2.0	V	I _C = -2 A, I _B = -4 mA ^{*1}
	V _{BE(sat)2}	—	—	-3.5	—	—	-3.5		I _C = -4 A, I _B = -40 mA ^{*1}
C to E diode forward voltage	V _D	—	—	3.0	—	—	3.0	V	I _D = 4 A
Turn on time	t _{on}	—	0.8	—	—	0.8	—	μs	I _C = -2 A,
Storage time	t _{stg}	—	4.0	—	—	4.0	—		I _{B1} = -I _{B2} = -4 mA
Fall time	t _f	—	1.0	—	—	1.0	—		

Note: 1. Pulse Test.

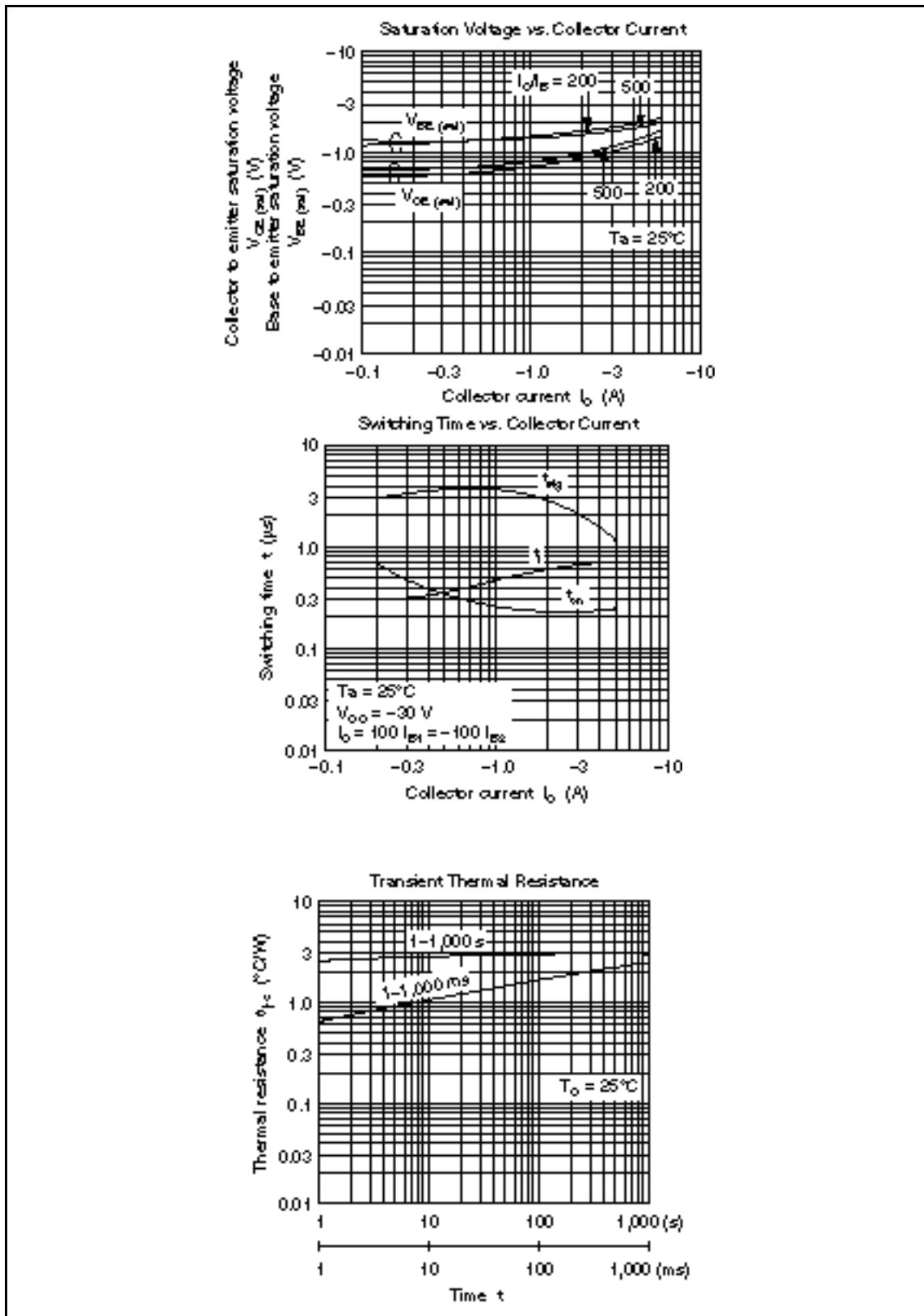
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