TOSHIBA Transistor Silicon PNP Triple Diffused Type

2SA2121

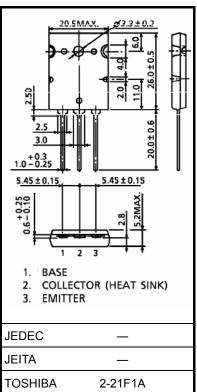
Power Amplifier Applications

- Complementary to 2SC5949
- Recommended for audio frequency amplifier output stage.

Absolute Maximum Ratings (Tc = 25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V _{CBO}	-200	V
Collector-emitter voltage	V _{CEO}	-200	V
Emitter-base voltage	V _{EBO}	-5	V
Collector current	Ι _C	-15	А
Base current	Ι _Β	-1.5	А
Collector power dissipation	PC	220	W
Junction temperature	Тј	150	°C
Storage temperature range	T _{stg}	-55 to 150	°C

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.



Weight: 9.75 g (typ.)

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling

Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

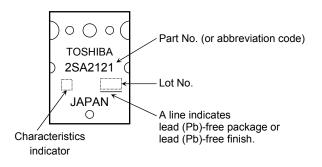
Unit: mm

Electrical Characteristics (Tc = 25°C)

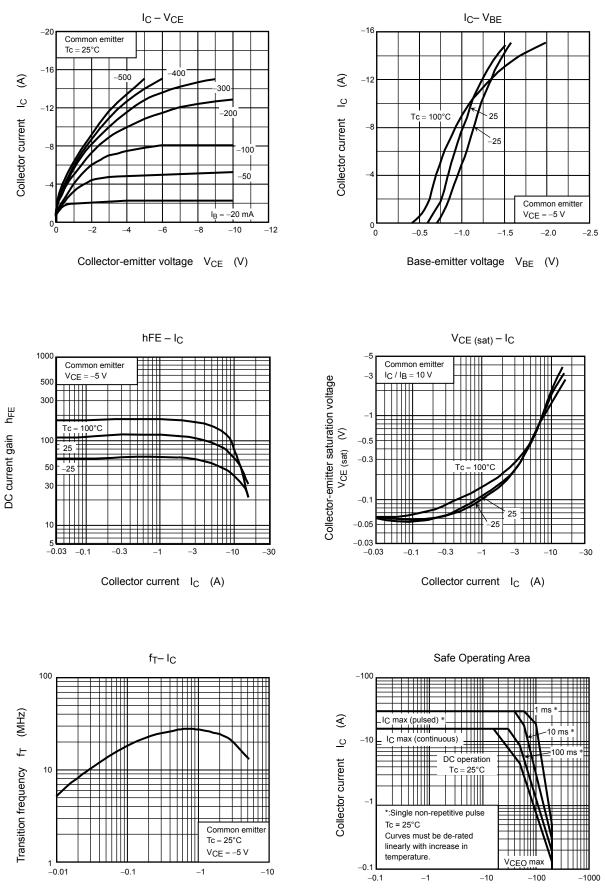
Characteristic	Symbol	Test Conditions	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	$V_{CB} = -200 \text{ V}, \text{ I}_{E} = 0$	_	_	-5.0	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -5 V, I _C = 0	_	_	-5.0	μA
Collector-emitter breakdown voltage	V (BR) CEO	$I_{\rm C}$ = -50 mA, $I_{\rm B}$ = 0	-200	_	_	V
DC current gain	h _{FE (1)} (Note 1)	V _{CE} = -5 V, I _C = -1 A	55	_	160	
	h _{FE (2)}	$V_{CE} = -5 V, I_C = -8 A$	35	60	_	
Collector-emitter saturation voltage	V _{CE (sat)}	I _C = -10 A, I _B = -1 A	—	-1.5	-3.0	V
Base-emitter voltage	V _{BE}	$V_{CE} = -5 V, I_C = -8 A$	_	-1.0	-1.5	V
Transition frequency	f _T	V _{CE} = -5 V, I _C = -1 A	_	25	_	MHz
Collector output capacitance	C _{ob}	V _{CB} = −10 V, I _E = 0, f = 1 MHz	_	470	_	pF

Note 1: h_{FE(1)} classification R: 55 to 110, O: 80 to 160

Marking



TOSHIBA



Collector-emitter voltage V_{CE} (V)

Collector current I_C (A)

RESTRICTIONS ON PRODUCT USE

20070701-EN

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