TOSHIBA Transistor Silicon NPN Triple Diffused Type

TTC0002

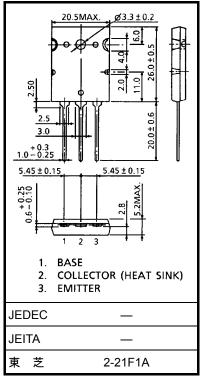
O Power Amplifier Applications

Unit: mm

- High collector voltage: V_{CEO} = 160 V (min)
- Complementary to TTA0002
- Recommended for 100-W high-fidelity audio frequency amplifier output stage.

Absolute Maximum Ratings (Tc = 25°C)

Characteristics		Symbol	Rating	Unit	
Collector-base voltage		V_{CBO}	160	V	
Collector-emitter voltage		V _{CEO}	160	V	
Emitter-base voltage		V_{EBO}	5	V	
Collector current	DC	IC	18	Α	
	Pulse	I _{CP}	35	Α	
Base current		ΙΒ	9	Α	
Collector power dissipation		PC	180	W	
Junction temperature		Tj	150	°C	
Storage temperature range		T _{stg}	−55 to 150	°C	



Weight: 9.75 g (typ.)

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.

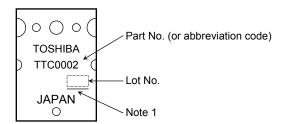
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).



Electrical Characteristics (Tc = 25°C)

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = 160 V, I _E = 0	_	_	1.0	μΑ
Emitter cut-off current	I _{EBO}	V _{EB} = 5 V, I _C = 0	_	_	1.0	μΑ
Collector-emitter breakdown voltage	V (BR) CEO	I _C = 50 mA, I _B = 0	160	_	_	٧
DC current gain	h _{FE (1)}	V _{CE} = 5 V, I _C = 1 A	80		160	
	h _{FE (2)}	V _{CE} = 5 V, I _C = 9 A	35			
Collector-emitter saturation voltage	V _{CE (sat)}	I _C = 9 A, I _B = 0.9 A	_		2.0	V
Base-emitter voltage	V _{BE}	V _{CE} = 5 V, I _C = 9 A	_	_	1.5	V
Transition frequency	f _T	V _{CE} = 5 V, I _C = 1 A	_	30	_	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	_	210	_	pF

Marking

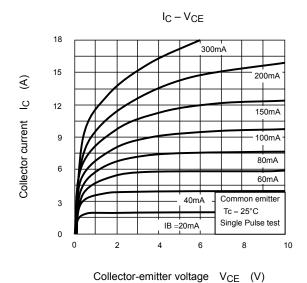


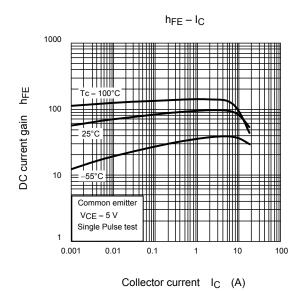
Note 1: Marking for identifying the indication of product Labels [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

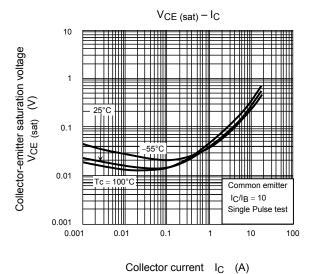
Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product.

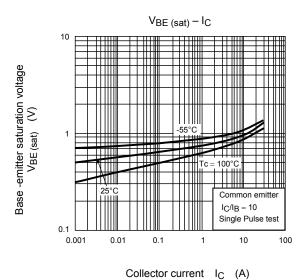
The RoHS is the Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

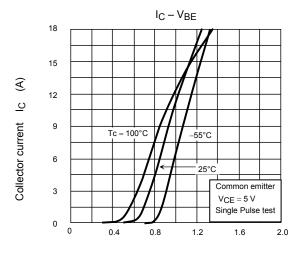
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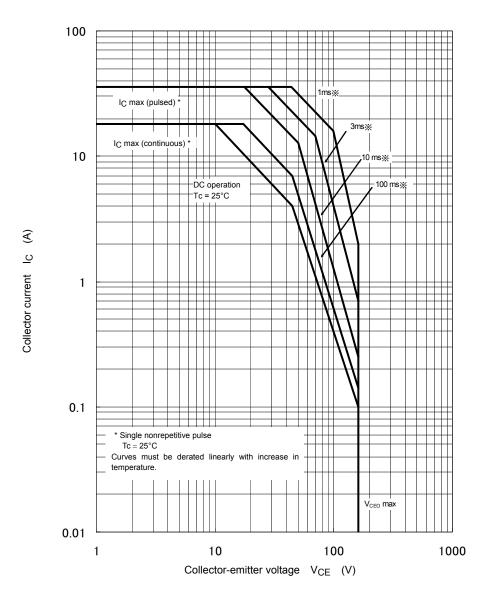




Base-emitter voltage V_{BE} (V)

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Safe Operating Area



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