TOSHIBA Transistor Silicon NPN Triple Diffused Type

2SD2353

Power Amplifier Applications

Unit: mm

- High DC current gain: $h_{FE} = 800$ to 3200
- Low collector saturation voltage: $V_{CE (sat)} = 0.4 \text{ V (typ.)}$

Absolute Maximum Ratings (Tc = 25°C)

Characteristics		Symbol	Rating	Unit	
Collector-base voltage		V_{CBO}	60	V	
Collector-emitter voltage		V _{CEO}	60	V	
Emitter-base voltage		V _{EBO}	7	V	
Collector current	DC	IC	3	Α	
	Pulse	I _{CP}	6		
Base current		ΙΒ	0.6	Α	
Collector power dissipation	Ta = 25°C	Pc	2	W	
	Tc = 25°C	FC	25		
Junction temperature		Tj	150	°C	
Storage temperature range		T _{stg}	−55 to 150	°C	

BASE **COLLECTOR EMITTER JEDEC** JEITA SC-67 TOSHIBA 2-10R1A

Weight: 1.7 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

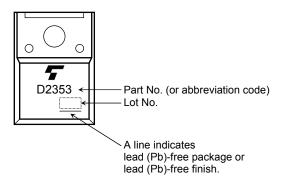
reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

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).

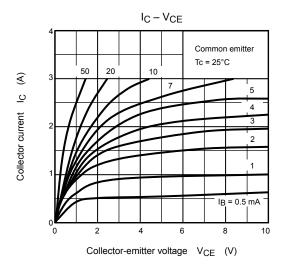
Electrical Characteristics (Tc = 25°C)

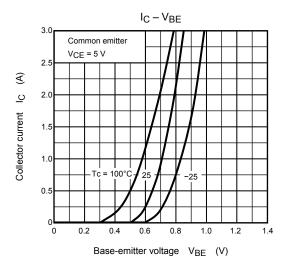
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = 60 V, I _E = 0	_	_	100	μΑ
Emitter cut-off current	I _{EBO}	V _{EB} = 6 V, I _C = 0	_	_	100	μA
Collector-emitter breakdown voltage	V (BR) CEO	I _C = 50 mA, I _B = 0	60	_	_	٧
DC current gain	h _{FE (1)}	V _{CE} = 5 V, I _C = 0.2 A	800	_	3200	
	h _{FE (2)}	V _{CE} = 5 V, I _C = 1.5 A	350	_	_	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = 1 A, I _B = 10 mA	_	0.4	1.0	V
Base-emitter voltage	V _{BE}	V _{CE} = 5 V, I _C = 0.5 A	_	0.7	1.0	V
Transition frequency	f _T	V _{CE} = 5 V, I _C = 0.5 A	_	18	_	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	_	42	_	pF

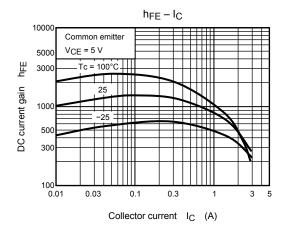
Marking

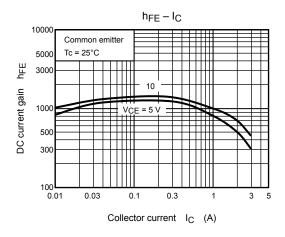


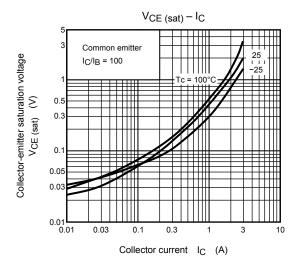
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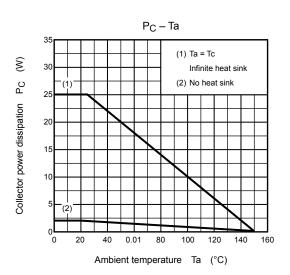




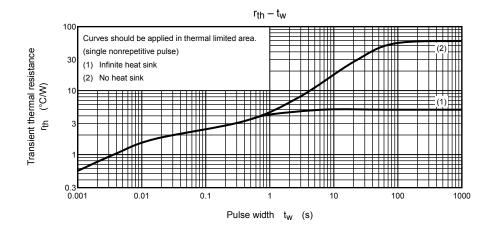


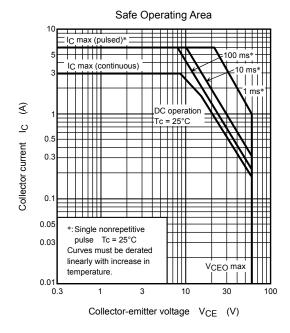






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