Unit: mm

TOSHIBA Transistor Silicon PNP Triple Diffused Type

2SB1640

Audio Frequency Power Amplifier

- Low saturation voltage: VCE (sat) = -1.5 V (max) (IC = -2 A, IB = -0.2 A)
- Collector metal (fin) is covered with mold region.
- Complementary to 2SD2525

Absolute Maximum Ratings (Ta = 25°C)

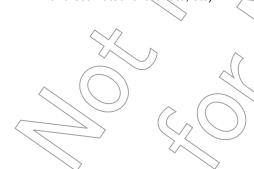
Characteristics		Symbol	Rating	Unit
Collector-base voltage		V _{CBO}	-60	(v)
Collector-emitter voltage		V _{CEO}	-60	V
Emitter-base voltage		V _{EBO}		V
Collector current	DC	IC	-3	A
	Pulse	I _{CP}	<u></u>	
Base current		I _B	-0.5	A
Collector power dissipation		Pc	1.8	∠ ⟨w
Junction temperature		Tj	150	°C
Storage temperature range		T _{stg}	-55 to 150	°C

Weight: 1.5 g (typ.)

Note: Using continuously under heavy loads (e.g. the application of high

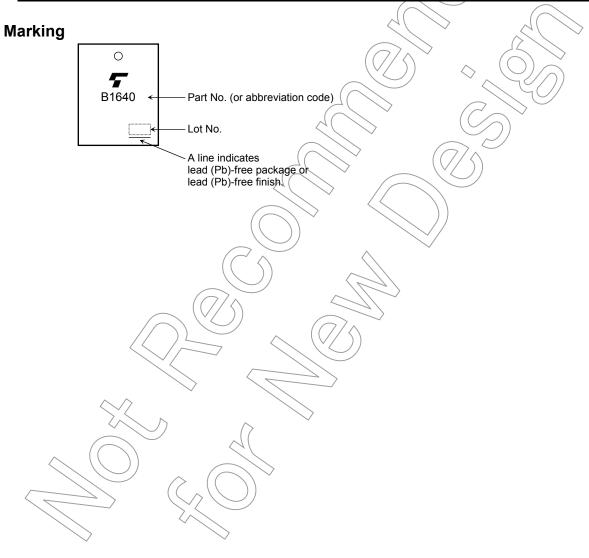
temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

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).

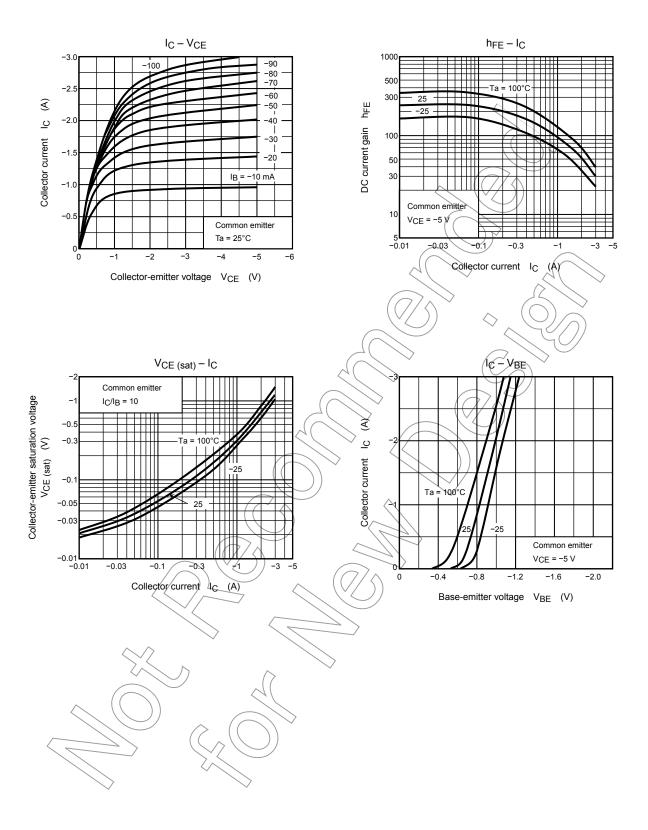


Electrical Characteristics (Ta = 25°C)

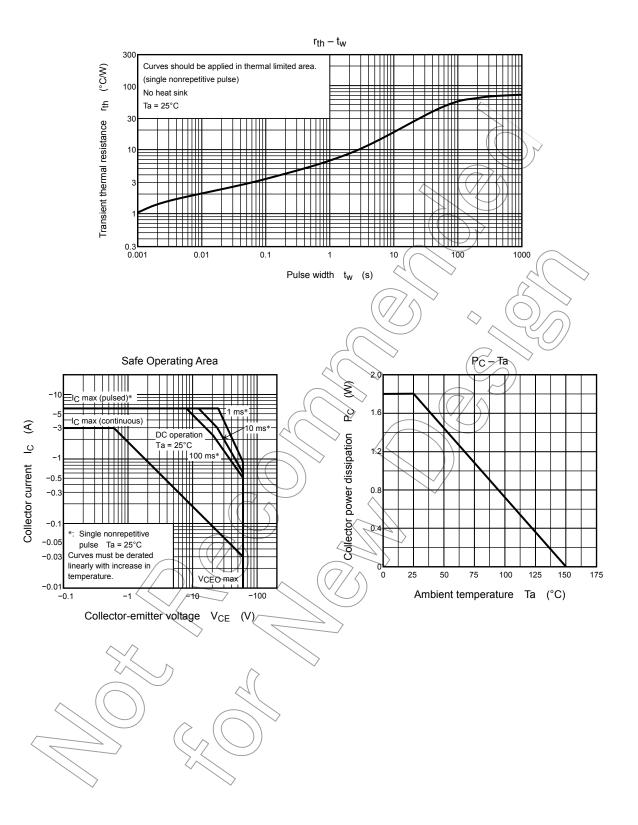
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = -60 V, I _E = 0	_	_	-10	μΑ
Emitter cut-off current	I _{EBO}	V _{EB} = -7 V, I _C = 0	_	_	-10	μΑ
Collector-emitter breakdown voltage	V (BR) CEO	$I_C = -50 \text{ mA}, I_B = 0$	-60	_	_	V
DC current gain	h _{FE (1)}	$V_{CE} = -5 \text{ V}, I_{C} = -0.5 \text{ A}$	100		320	
	h _{FE (2)}	V _{CE} = -5 V, I _C = -2 A	15) >-	_	
Collector-emitter saturation voltage	V _{CE} (sat)	I _C = -2 A, I _B = -0.2 A	>_	-0.1	-1.5	V
Base-emitter voltage	V _{BE}	V _{CE} = -5 V, I _C = -0.5 A	$\bigcirc)$	-0.75	-1.0	V
Transition frequency	f _T	V _{CE} = -5 V, I _C = -0.5 A	_	9	_	MHz
Collector output capacitance	C _{ob}	V _{CB} = -10 V, I _E = 0, f = 1 MHz	· –	50	_	pF



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