

TOSHIBA Transistor Silicon NPN Triple Diffused Type

2SD2525

Audio Frequency Power Amplifier Applications

- High DC current gain: 100 (min)
- Low saturation voltage: $V_{CE(sat)} = 0.4 \text{ V (typ.)}$ ($I_C = 2 \text{ A}$, $I_B = 0.2 \text{ A}$)
- Complementary to 2SB1640

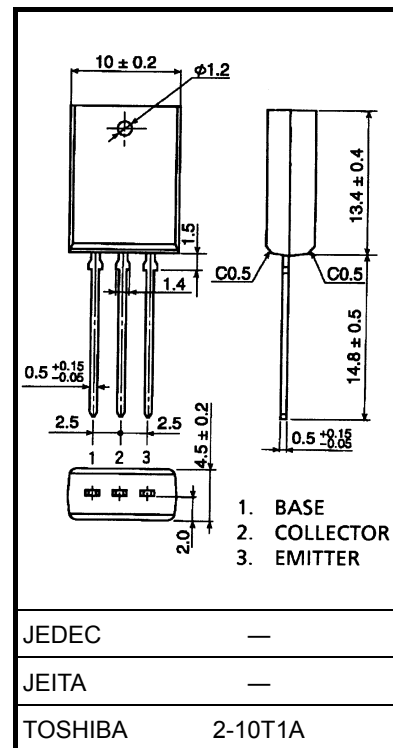
Absolute Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit
Collector-base voltage		V_{CBO}	60	V
Collector-emitter voltage		V_{CEO}	60	V
Emitter-base voltage		V_{EBO}	7	V
Collector current	DC	I_C	3	A
	Pulse	I_{CP}	6	
Base current		I_B	0.5	A
Collector power dissipation		P_C	1.8	W
Junction temperature		T_j	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.	<table border="1"> <tr> <td>TOSHIBA</td> <td>2-10T1A</td> </tr> <tr> <td colspan="2">Weight: 1.5 g (typ.)</td> </tr> </table>	TOSHIBA	2-10T1A	Weight: 1.5 g (typ.)	
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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

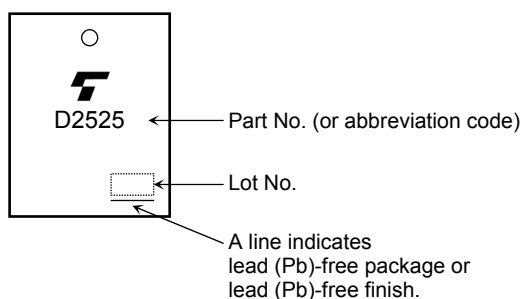


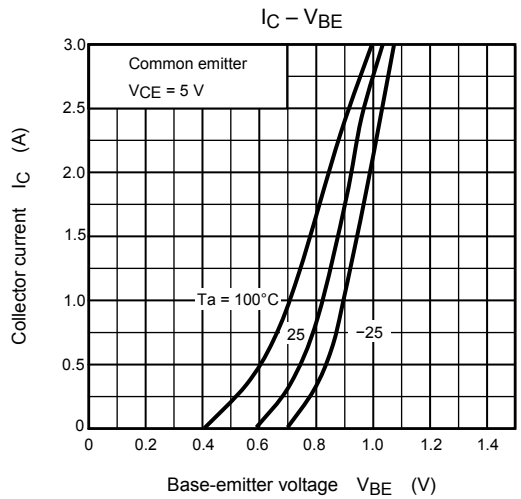
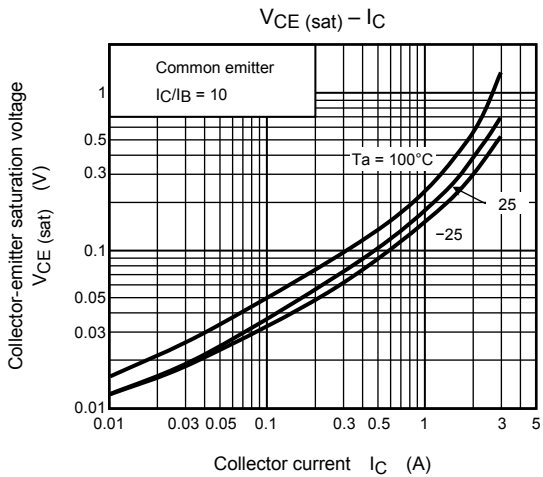
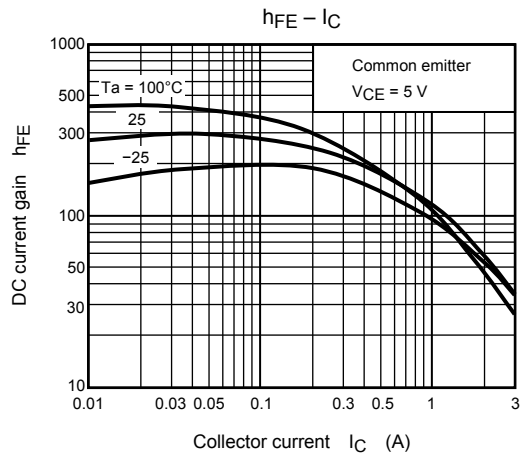
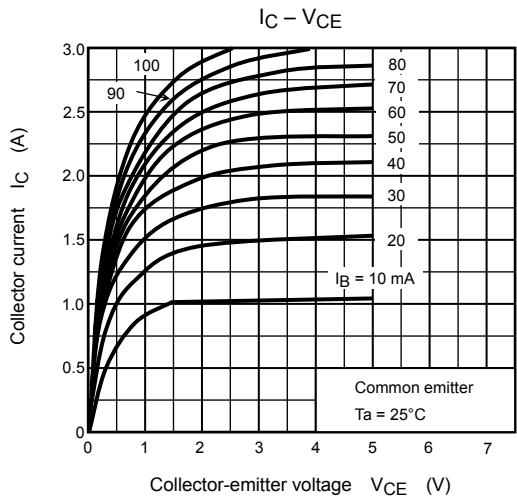
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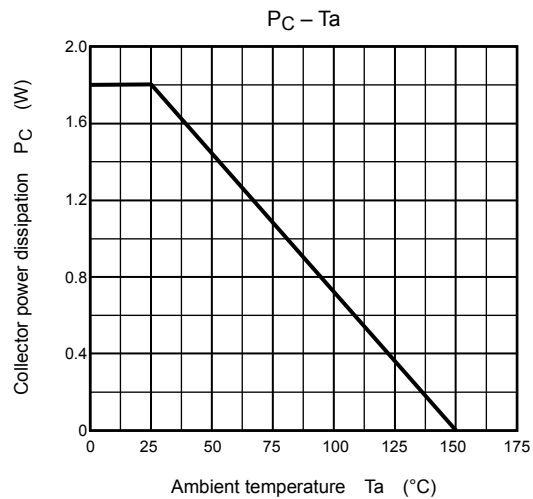
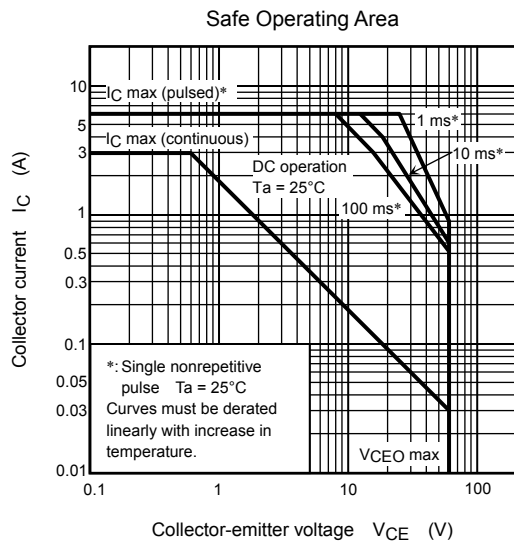
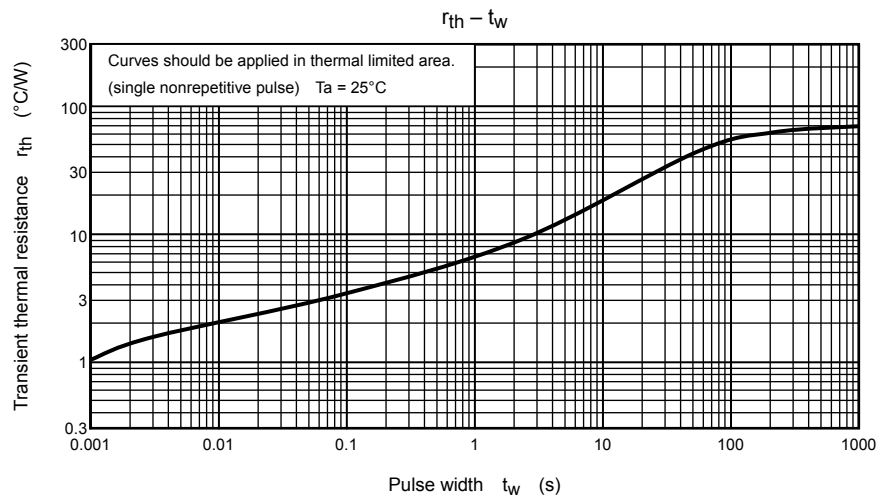
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 60\text{ V}, I_E = 0$	—	—	10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 7\text{ V}, I_C = 0$	—	—	10	μA
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	
	$h_{FE (2)}$	$V_{CE} = 5\text{ V}, I_C = 2\text{ A}$	20	—	—	
Collector-emitter saturation voltage	$V_{CE (sat)}$	$I_C = 2\text{ A}, I_B = 0.2\text{ A}$	—	0.4	1.0	V
Base-emitter voltage	V_{BE}	$V_{CE} = 5\text{ V}, I_C = 0.5\text{ A}$	—	0.75	1.0	V
Transition frequency	f_T	$V_{CE} = 5\text{ V}, I_C = 0.5\text{ A}$	—	3	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	35	—	pF

Marking







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20070701-EN

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