

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

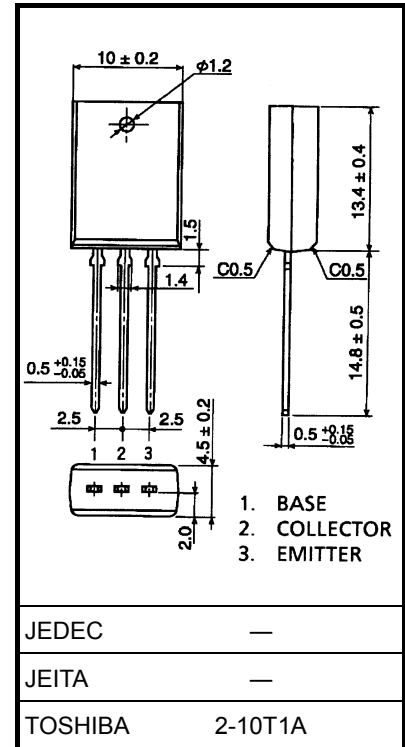
## Absolute Maximum Ratings (Ta = 25°C)

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.

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

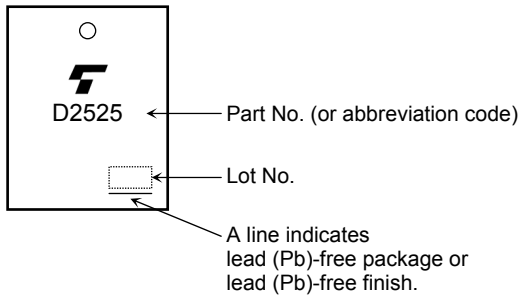


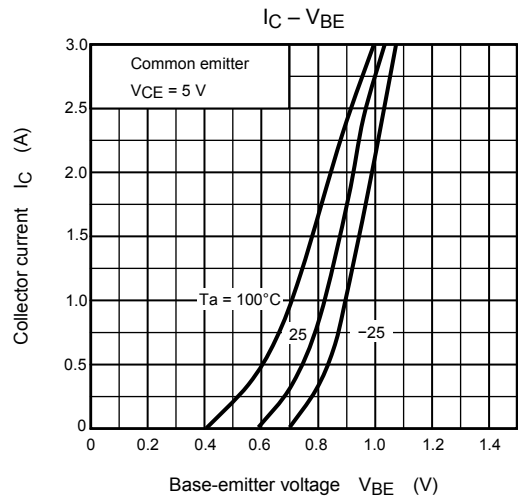
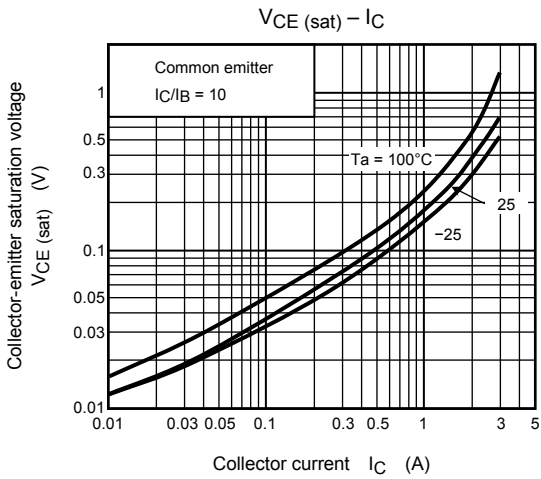
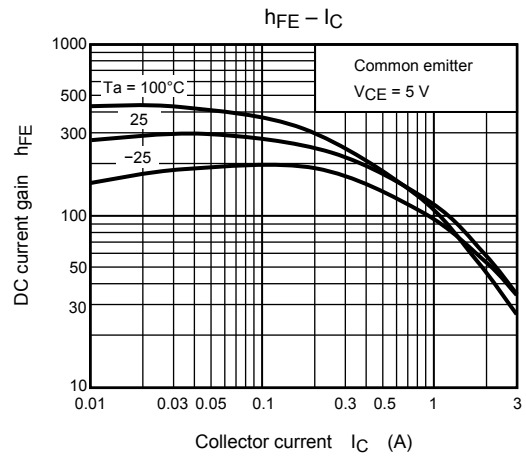
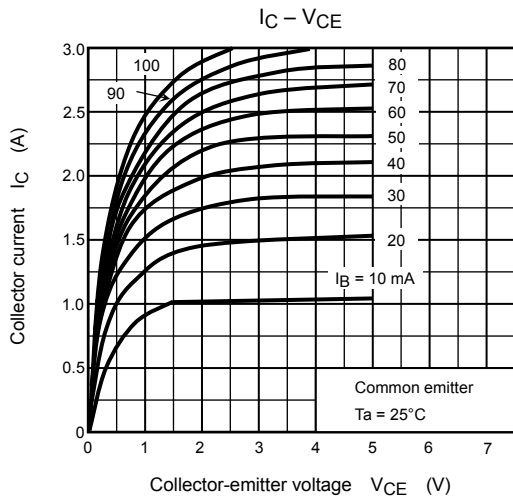
Weight: 1.5 g (typ.)

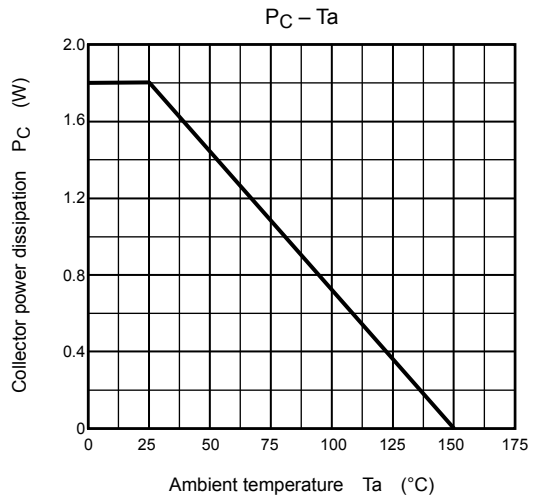
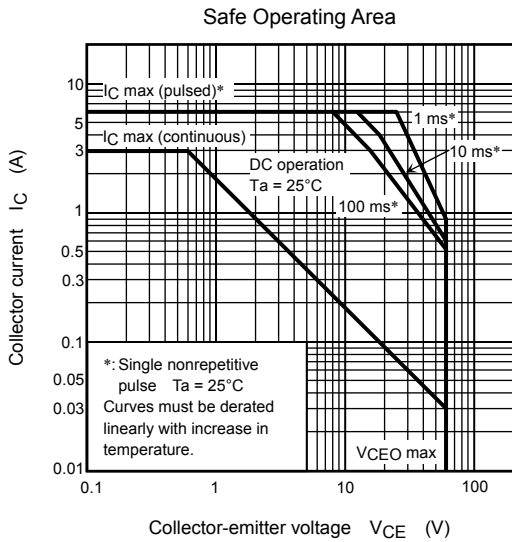
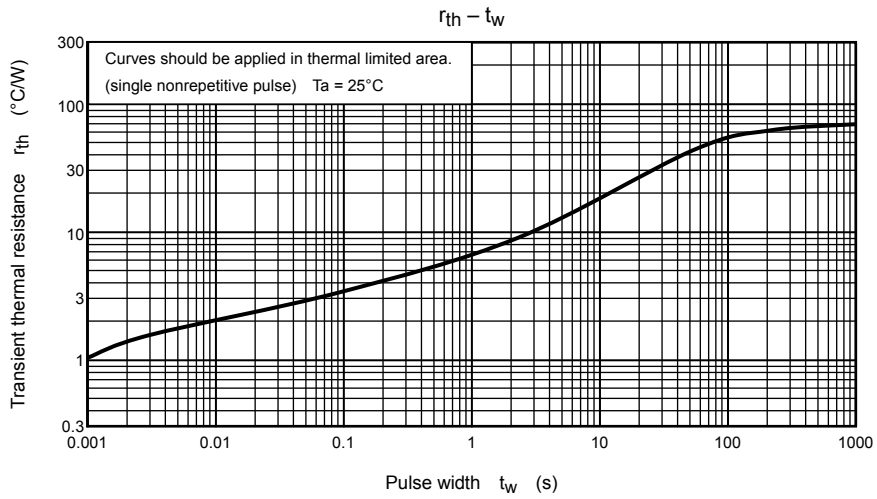
## Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 60\text{ V}, I_E = 0$	—	—	10	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 7\text{ V}, I_C = 0$	—	—	10	$\mu\text{A}$
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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