2SD1521

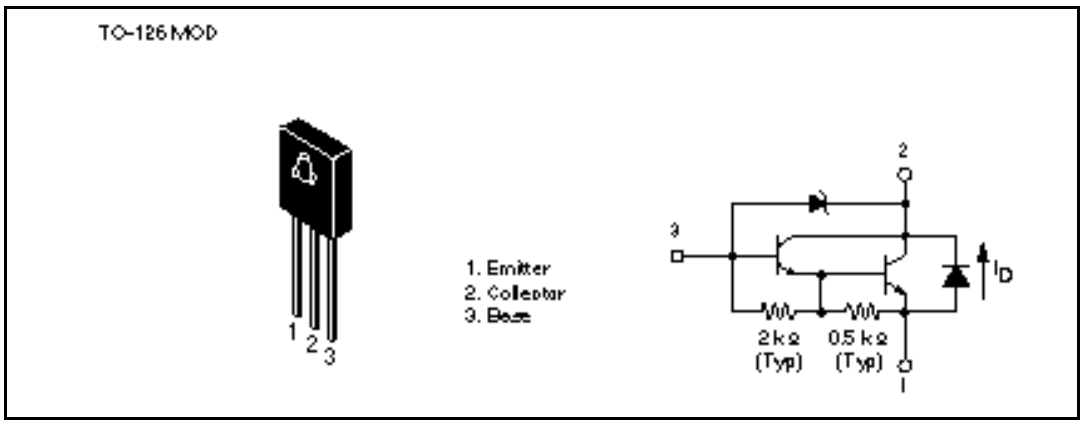
Silicon NPN Epitaxial

HITACHI

Application

Low frequency power amplifier

Outline



Absolute Maximum Ratings (Ta = 25°C)

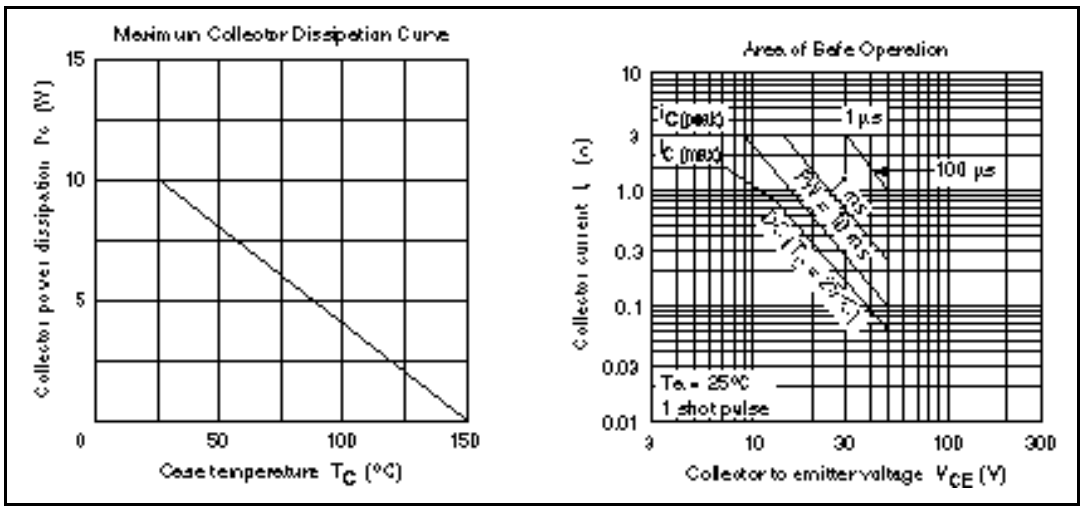
Item	Symbol	Rating	Unit
Collector to emitter voltage	V_{CEO}	50	V
Emitter to base voltage	V_{EBO}	7	V
Collector current	I_C	1.5	A
Collector peak current	$I_{C\ (peak)}$	3.0	A
Collector power dissipation	P_C	10	W
Junction temperature	Tj	150	°C
Storage temperature	Tstg	–55 to +150	°C
C to E diode forward current	I_D*[1]	1.5	A

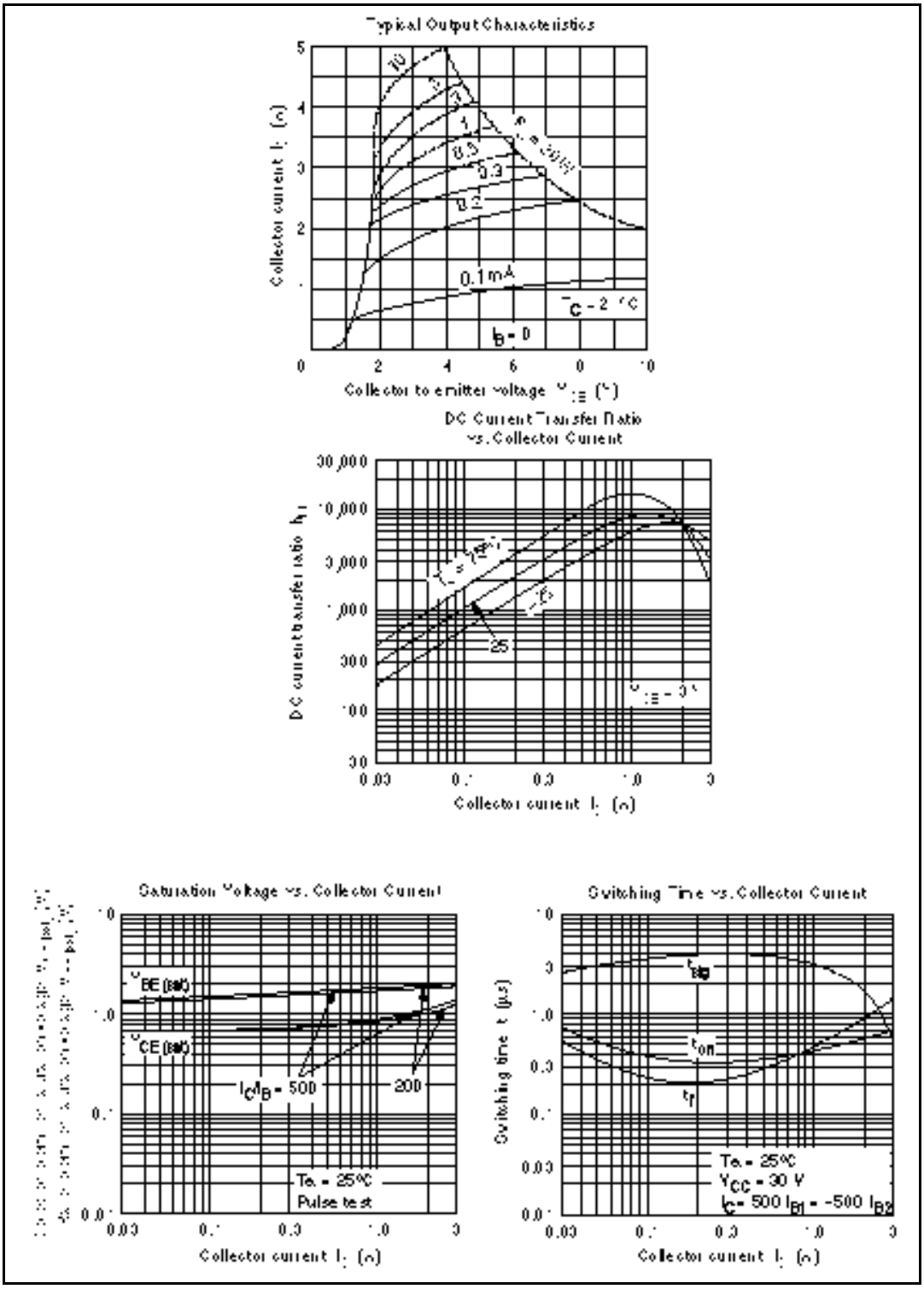
Note: 1. Value at T_C = 25°C.

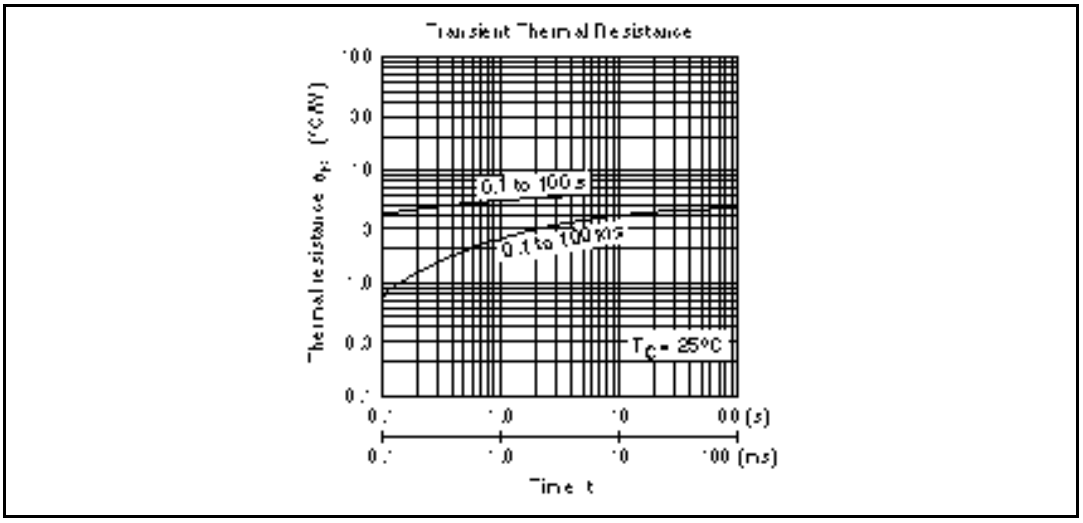
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage (Zener breakdown voltage)	$V_{(BR)CBO}$ [V_Z]	50	60	70	V	I_C = 0.1 mA, I_E = 0
Emitter to base breakdown voltage	$V_{(BR)EBO}$	7	—	—	V	I_E = 50 mA, I_C = 0
Collector cutoff current	I_{CEO}	—	—	10	µA	V_{CE} = 50 V, R_{BE} = ∞
DC current transfer ratio	h_{FE}	2000	—	30000		V_{CE} = 3 V, I_C = 1 A*[1]
Collector to emitter saturation voltage	$V_{CE\ (sat)1}$	—	—	1.5	V	I_C = 1 A, I_B = 1 mA*[1]
	$V_{CE\ (sat)2}$	—	—	2.0	V	I_C = 1.5 A, I_B = 1.5 mA*[1]
Base to emitter saturation voltage	$V_{BE\ (sat)1}$	—	—	2.0	V	I_C = 1 A, I_B = 1 mA*[1]
	$V_{BE\ (sat)2}$	—	—	2.5	V	I_C = 1.5 A, I_B = 1.5 mA*[1]
C to E diode forward voltage	V_D	—	—	3.0	V	I_D = 1.5 A
Turn on time	Ton	—	0.5	—	µs	I_C = 1 A, I_{B1} = $-I_{B2}$ = 1 mA
Turn off time	Toff	—	2.0	—	µs	

Note: 1. Pulse test.







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