

TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

2SC4251

TV Tuner, VHF Oscillator Applications

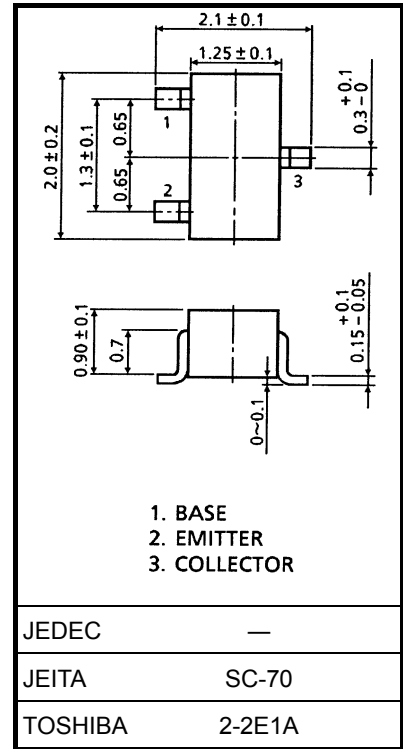
Unit: mm

Absolute Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	30	V
Collector-emitter voltage	V _{CEO}	15	V
Emitter-base voltage	V _{EBO}	3	V
Collector current	I _C	50	mA
Base current	I _B	25	mA
Collector power dissipation	P _C	100	mW
Junction temperature	T _j	125	°C
Storage temperature range	T _{stg}	-55~125	°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).

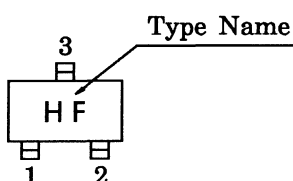


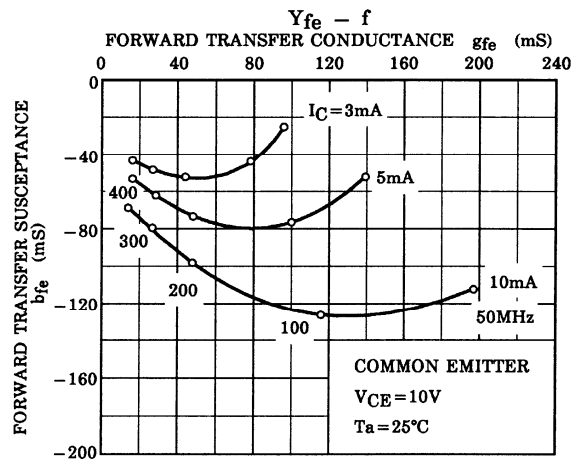
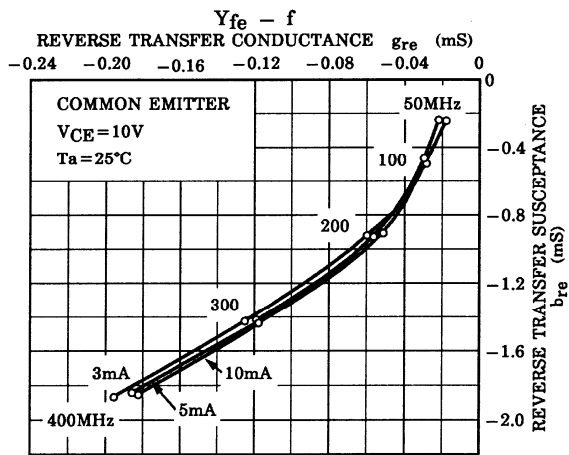
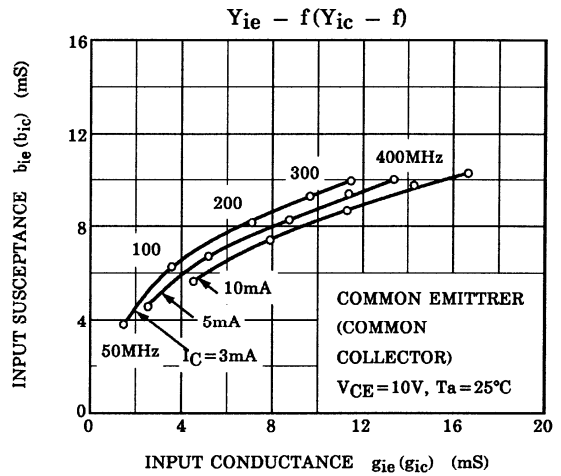
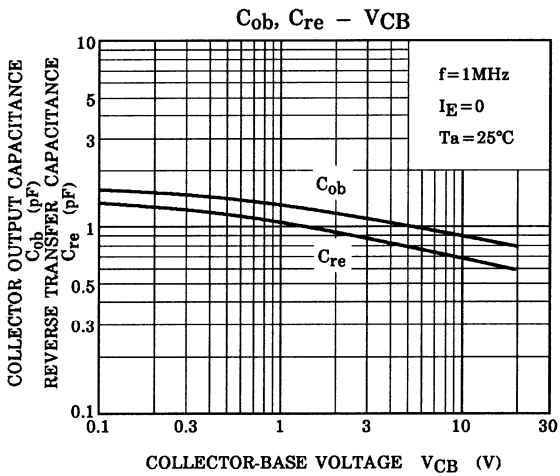
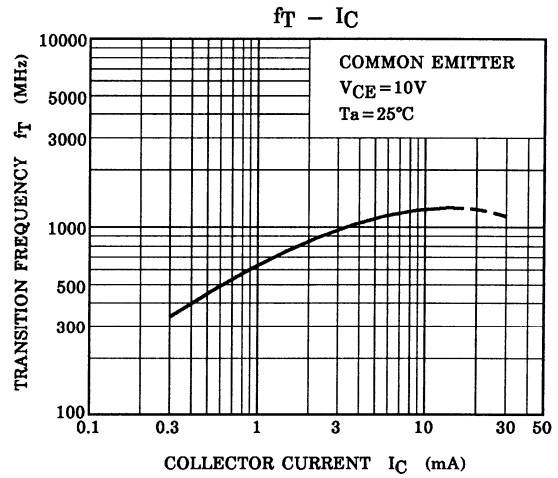
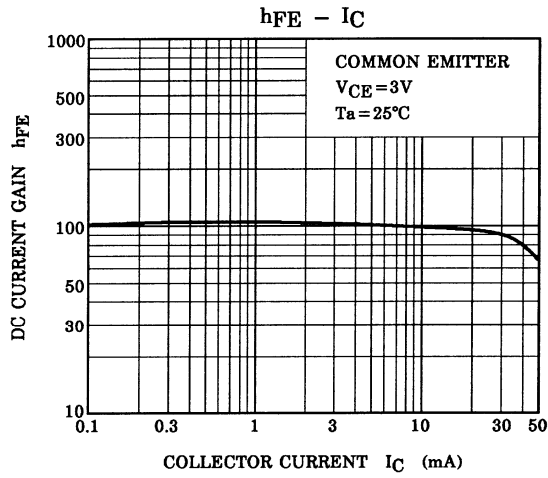
Weight: 0.006 g (typ.)

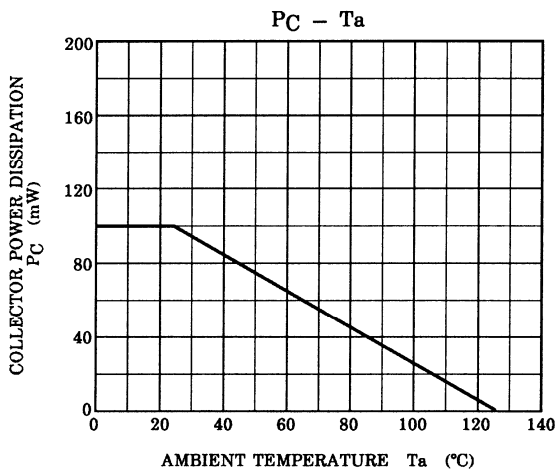
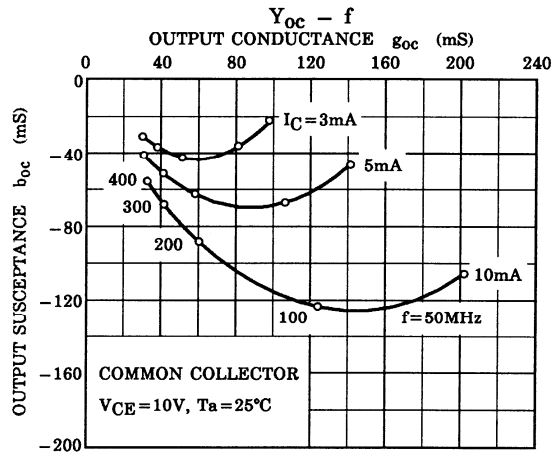
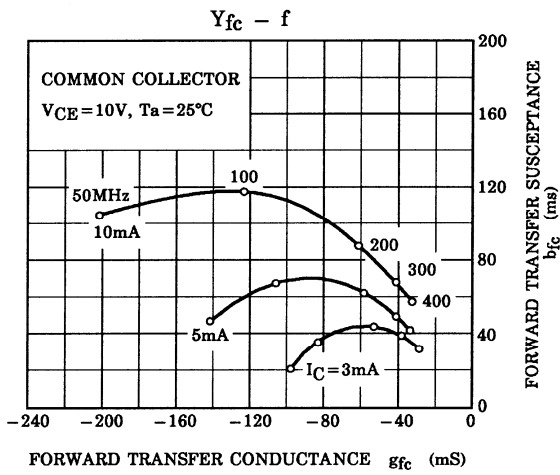
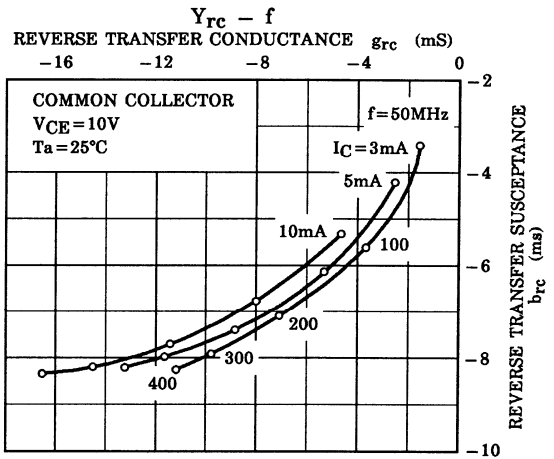
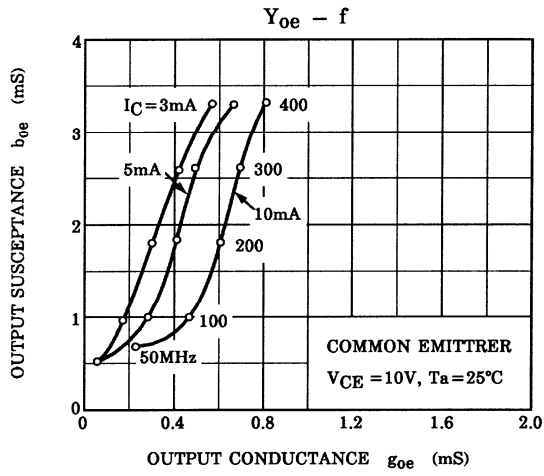
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I _{CBO}	V _{CB} = 15 V, I _E = 0	—	—	0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 3 V, I _C = 0	—	—	1.0	μA
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1 mA, I _B = 0	15	—	—	V
DC current gain	h _{FE}	V _{CE} = 3 V, I _C = 8 mA	40	100	200	
Transition frequency	f _T	V _{CE} = 10 V, I _C = 8 mA	650	1100	—	MHz
Collector output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	0.9	1.3	pF
Collector-base time constant	C _{c.rbb'}	V _{CB} = 10 V, I _C = 8 mA, f = 30 MHz	—	7	12	ps

Marking







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