

TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

# 2SC4252

TV Tuner, VHF Oscillator Applications  
(common collector)

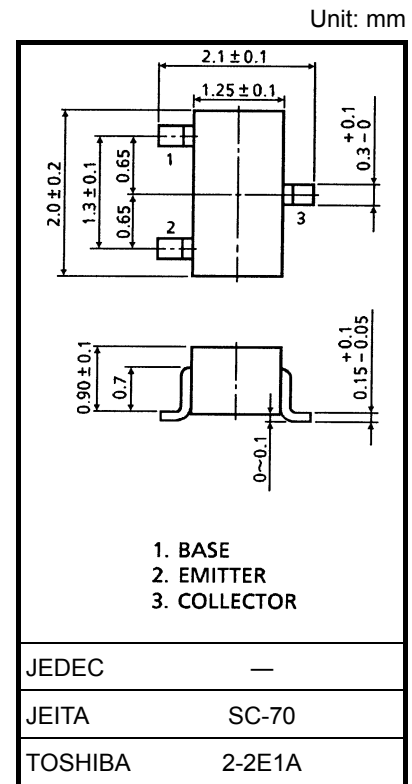
- Transition frequency is high and dependent on current excellently.

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

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	20	V
Collector-emitter voltage	V <sub>CEO</sub>	12	V
Emitter-base voltage	V <sub>EBO</sub>	3	V
Base current	I <sub>B</sub>	15	mA
Collector current	I <sub>C</sub>	30	mA
Collector power dissipation	P <sub>C</sub>	100	mW
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature range	T <sub>stg</sub>	-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).

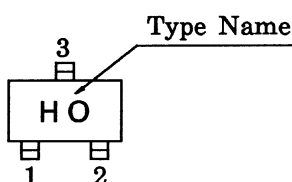


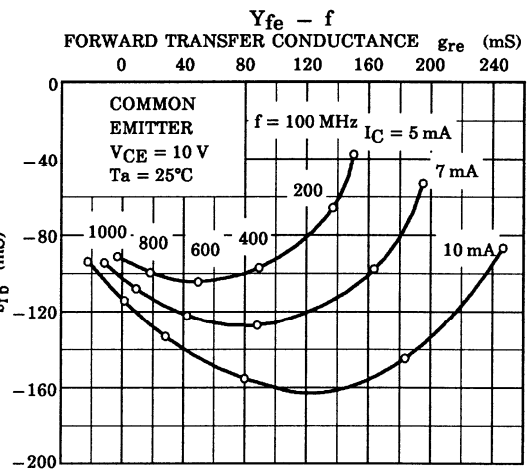
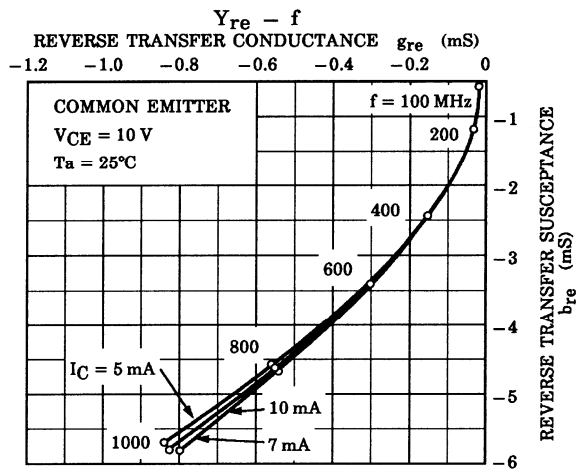
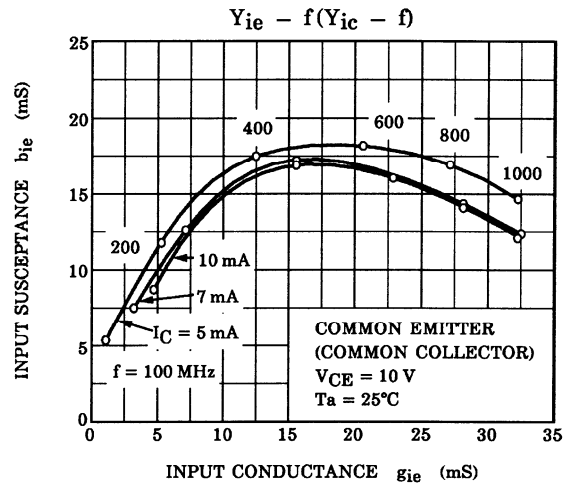
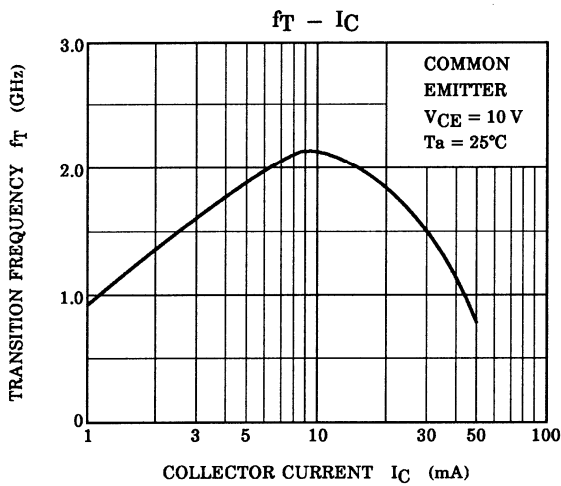
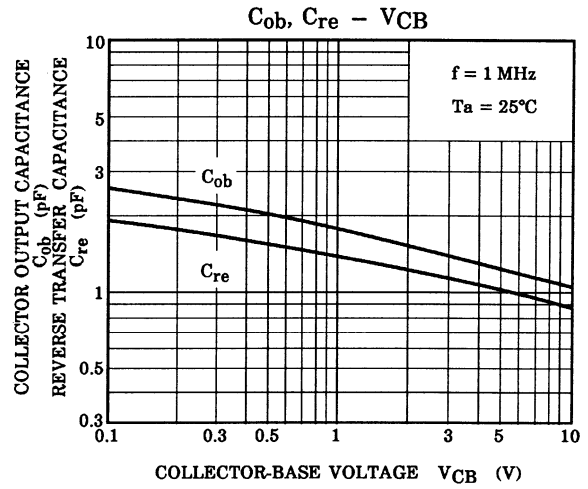
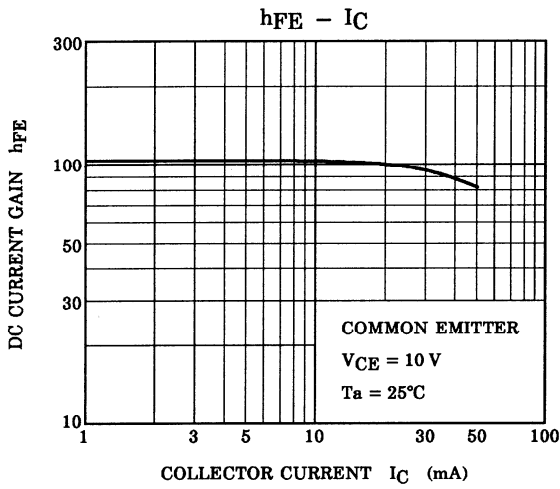
Weight: 0.006 g (typ.)

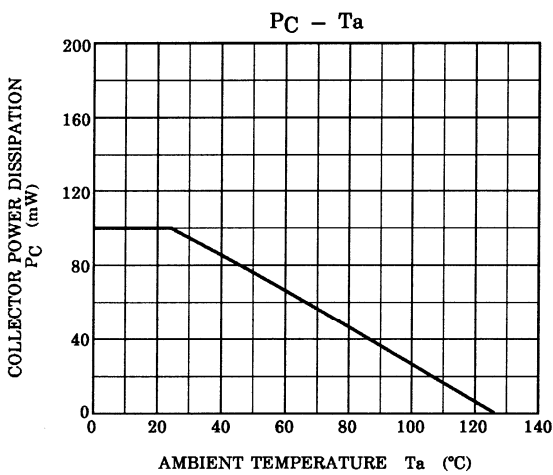
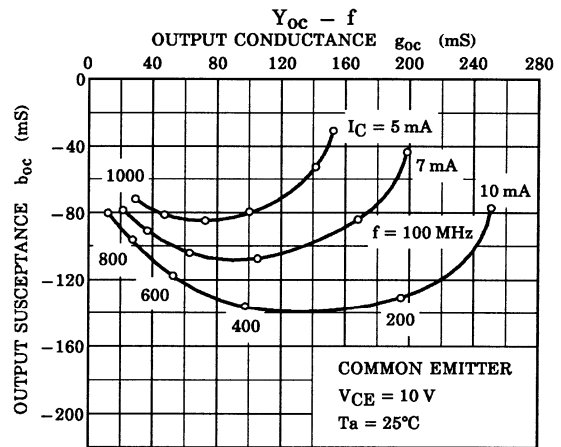
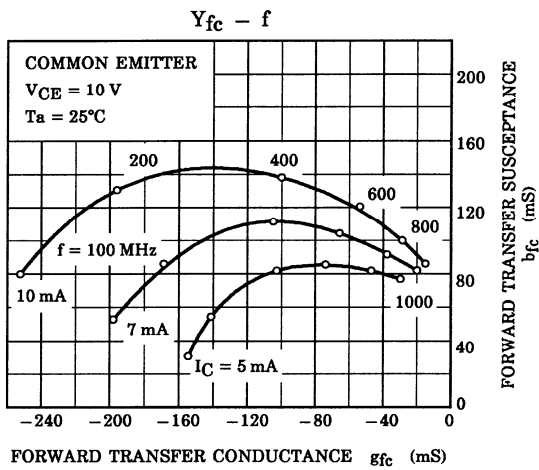
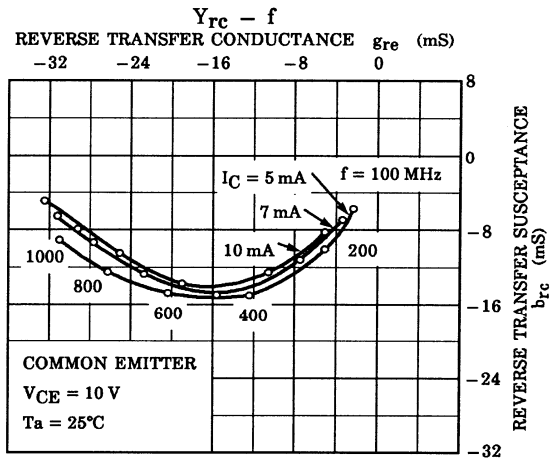
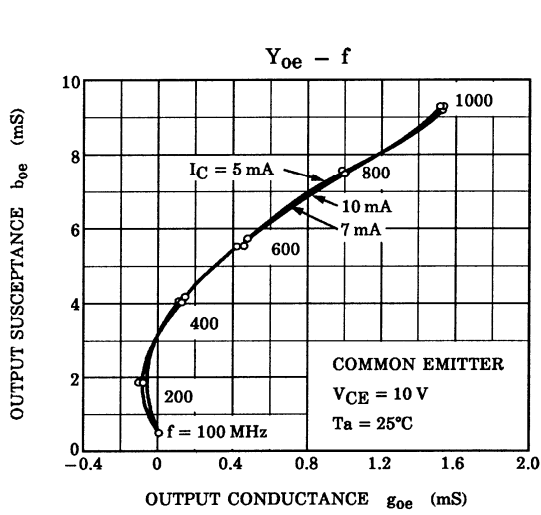
### Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 20 V, I <sub>E</sub> = 0	—	—	0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 3 V, I <sub>C</sub> = 0	—	—	1.0	μA
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1 mA, I <sub>B</sub> = 0	12	—	—	V
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 5 mA	40	100	250	
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 5 mA	1.5	2.1	—	GHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	—	1.1	1.4	pF
Collector-base time constant	C <sub>c-rbb'</sub>	V <sub>CB</sub> = 10 V, I <sub>C</sub> = 5 mA, f = 30 MHz	—	4.3	10	ps

### Marking







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