

TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

2SC2347

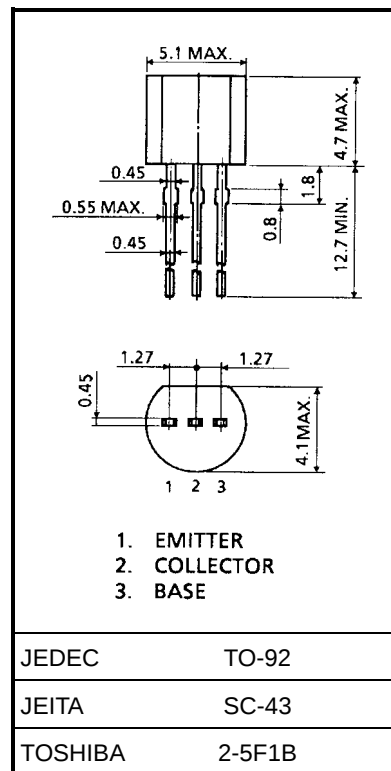
TV UHF Oscillator Applications

TV VHF Mixer Applications

Unit: mm

Maximum Ratings (Ta = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	15	V
Emitter-base voltage	V_{EBO}	3	V
Collector current	I_C	50	mA
Emitter current	I_E	–50	mA
Collector power dissipation	P_C	250	mW
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	–55~125	°C

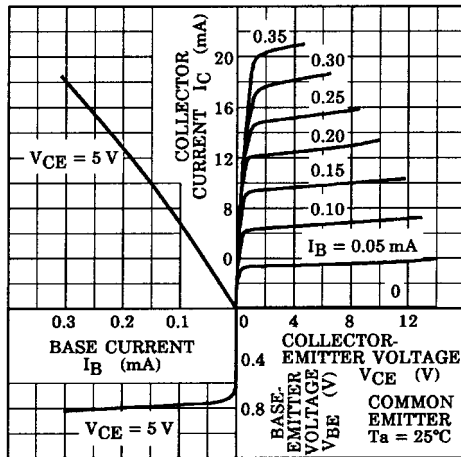


Weight: 0.21 g (typ.)

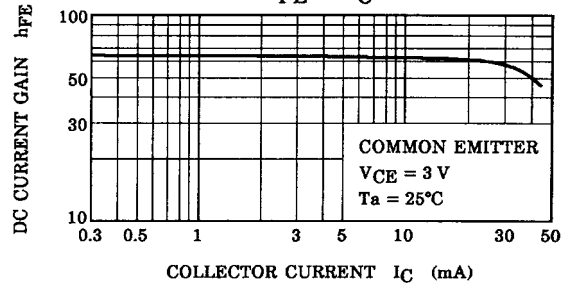
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 15 \text{ V}, I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3 \text{ V}, I_C = 0$	—	—	1.0	μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	15	—	—	V
DC current gain	h_{FE}	$V_{CE} = 3 \text{ V}, I_C = 8 \text{ mA}$	20	—	—	
Transition frequency	f_T	$V_{CE} = 10 \text{ V}, I_C = 8 \text{ mA}$	650	—	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	1.2	1.5	pF
Collector-base time constant	$C_c.rbb'$	$V_{CB} = 10 \text{ V}, I_C = 8 \text{ mA}, f = 30 \text{ MHz}$	—	—	12	ps

STATIC CHARACTERISTICS

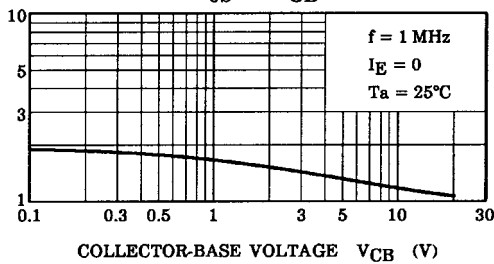


$h_{FE} - I_C$

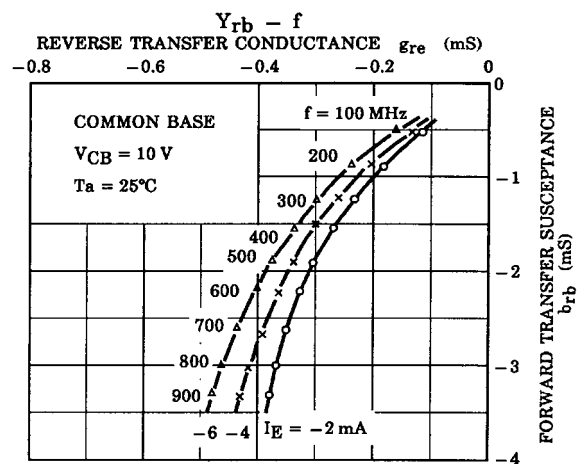
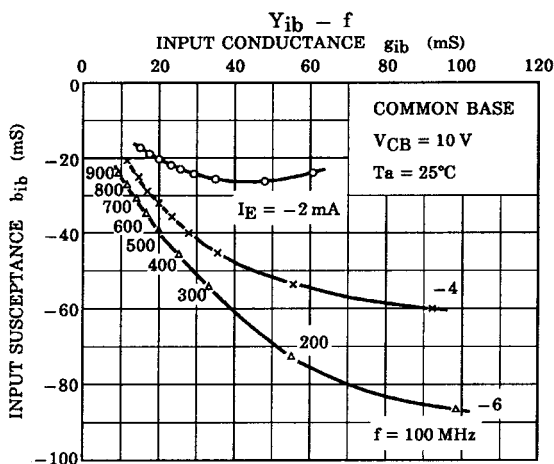
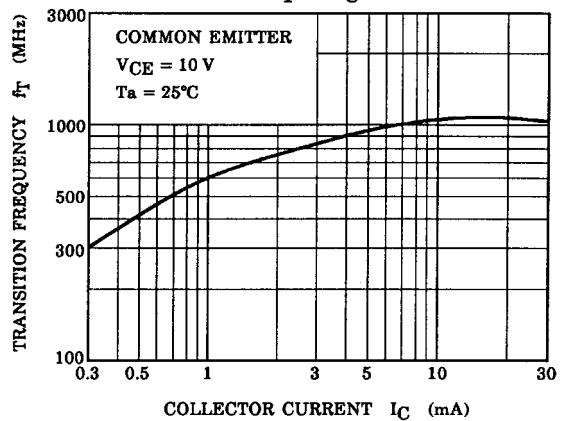


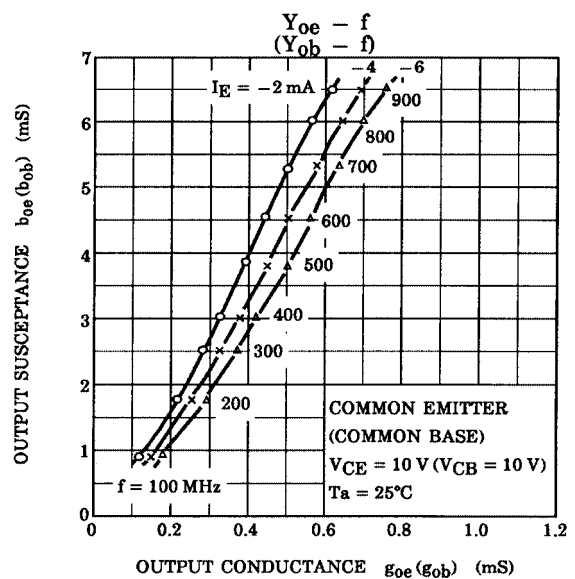
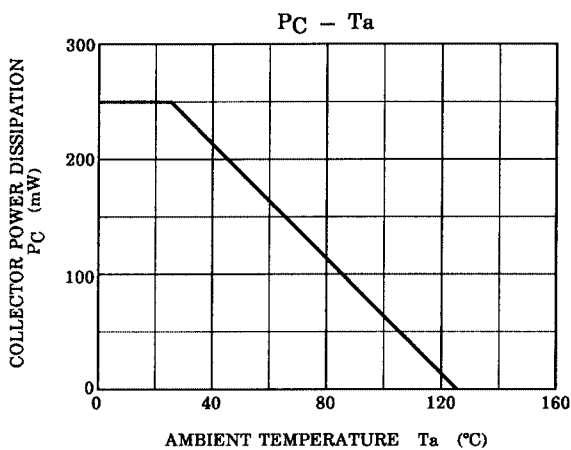
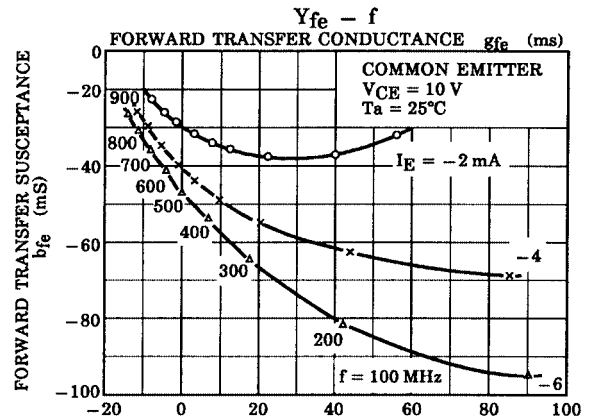
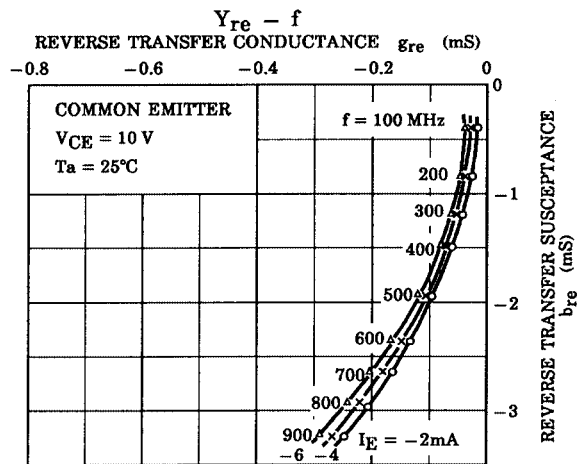
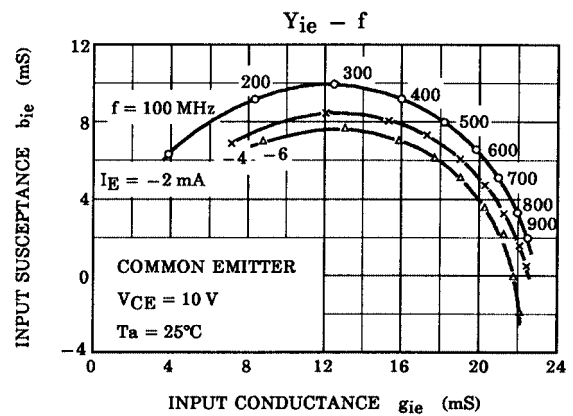
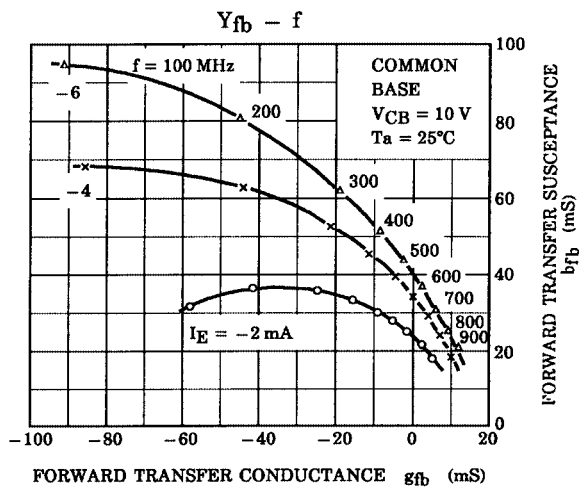
COLLECTOR OUTPUT CAPACITANCE
 C_{ob} (pF)

$C_{ob} - V_{CB}$



$f_T - I_C$





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