TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

# 2SC3862

TV Tuner, UHF Mixer Applications
VHF~UHF Band RF Amplifier Applications

• Exchange of emitter for base in 2SC3120

## **Maximum Ratings (Ta = 25°C)**

Characteristics	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	30	V
Collector-emitter voltage	V <sub>CEO</sub>	15	V
Emitter-base voltage	V <sub>EBO</sub>	3	V
Collector current	IC	50	mA
Base current	ΙΒ	25	mA
Collector power dissipation	PC	150	mW
Junction temperature	Tj	125	°C
Storage temperature range	T <sub>stg</sub>	-55~125	°C

1. EMITTER 2. BASE 3. COLLECTOR

JEDEC —

JEITA —

TOSHIBA 2-3F1D

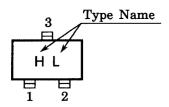
Weight: 0.012 g (typ.)

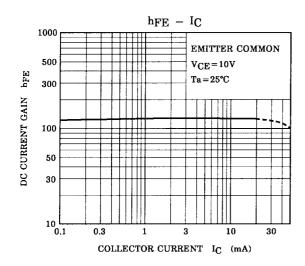
## **Electrical Characteristics (Ta = 25°C)**

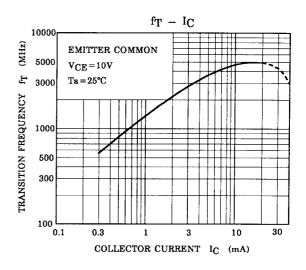
Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	$V_{CB} = 30 \text{ V}, I_{E} = 0$	_	_	0.1	μА
Emitter cut-off current	I <sub>EBO</sub>	$V_{EB} = 2 \text{ V}, I_{C} = 0$	_	_	1.0	μΑ
Collector-emitter breakdown voltage	V (BR) CEO	$I_C = 1 \text{ mA}, I_B = 0$	15	_	_	٧
DC current gain	h <sub>FE</sub>	$V_{CE} = 10 \text{ V}, I_{C} = 5 \text{ mA}$	40	100	200	
Reverse transfer capacitance	C <sub>re</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	_	0.6	0.9	pF
Transition frequency	f <sub>T</sub>	$V_{CE} = 10 \text{ V}, I_C = 2 \text{ mA}$	1500	2400	_	MHz

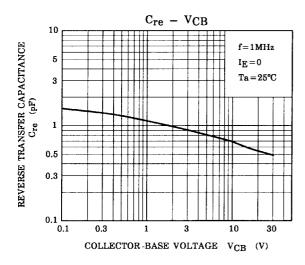
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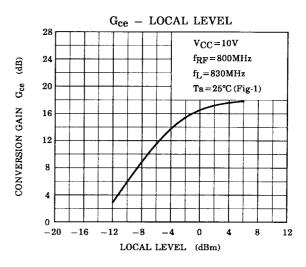
## Marking

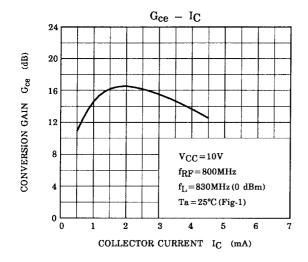


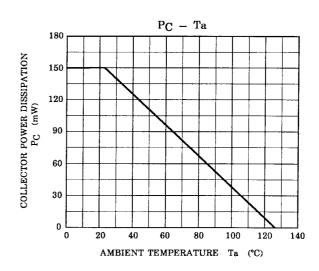








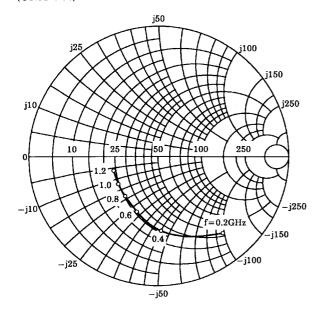


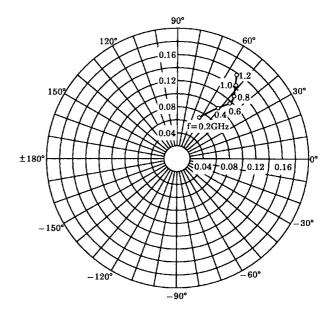


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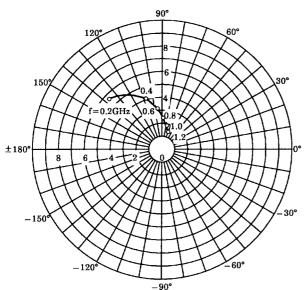
 $\begin{array}{l} S_{11e} \\ V_{CE} = 10V \\ I_{C} = 2mA \\ Ta = 25^{\circ}C \\ (UNIT:\Omega) \end{array}$ 







 $\begin{array}{l} S_{21e} \\ V_{CE} = 10V \\ I_{C} = 2mA \\ T_{a} = 25^{\circ}C \end{array}$ 



 $\begin{array}{c} S_{22e} \\ V_{CE} = 10V \\ I_{C} = 2mA \end{array}$ Ta = 25°C (UNIT :  $\Omega$ ) j50 j25 j100 j150 j10 j250 <del>| | 1</del>00 250 10 f=0.2GHz -j250 -j150 -j100 -j50

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