

TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

2SC4250FV

TV VHF Mixer Applications

- Low reverse transfer capacitance: $C_{re} = 0.45 \text{ pF}$ (typ.)

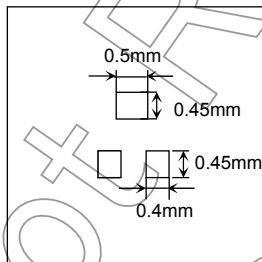
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	20	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 (Note)	150	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 125	$^\circ\text{C}$

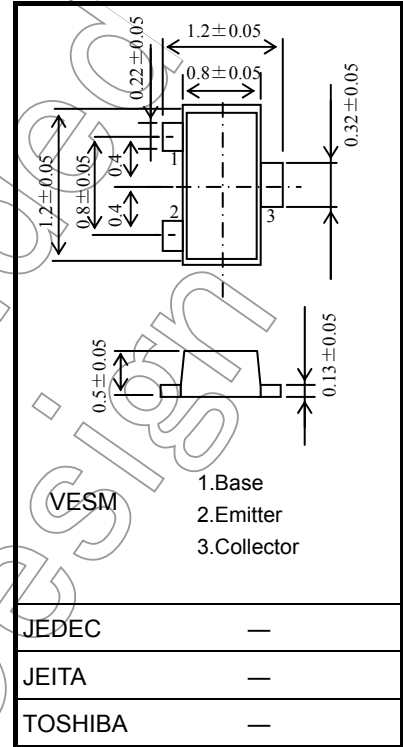
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

Note: when mounted on a 25.4 mm × 25.4 mm × 1.6 mm glass epoxy printed circuit board.



Unit: mm



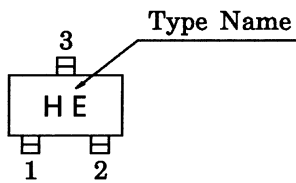
Weight: 1.5mg (typ.)

Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 25\text{ V}, I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 3\text{ V}, I_C = 0$	—	—	1	μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{ mA}, I_B = 0$	20	—	—	V
DC current gain	h_{FE}	$V_{CE} = 10\text{ V}, I_C = 5\text{ mA}$	40	—	300	
Reverse transfer capacitance	C_{re} (Note)	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	0.45	0.6	pF
Transition frequency	f_T	$V_{CE} = 10\text{ V}, I_C = 5\text{ mA}$	900	1400	—	MHz

Note: C_{re} is measured by three terminal capacitance bridge method.

Marking



Not Recommended for New Design

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