

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

# 2SC3125

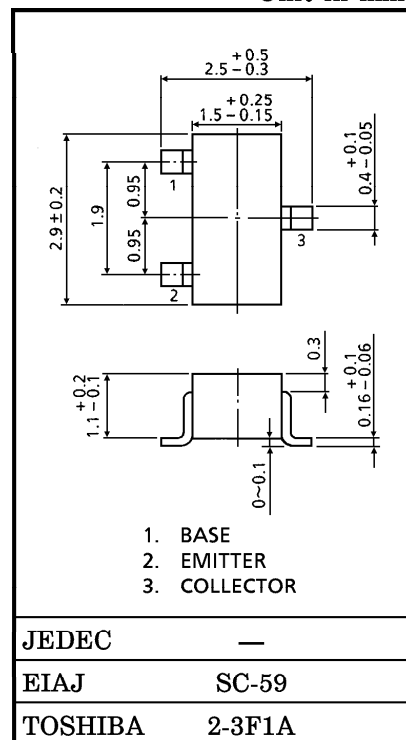
TV FINAL PICTURE IF AMPLIFIER APPLICATIONS

Unit in mm

- Good Lineality of  $f_T$

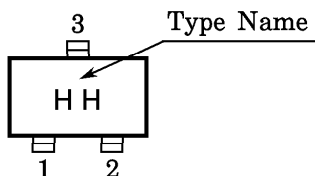
MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CB0}$	30	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	4	V
Collector Current	$I_C$	50	mA
Base Current	$I_B$	25	mA
Collector Power Dissipation	$P_C$	150	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ\text{C}$



Weight : 0.012g

Marking



ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 30\text{V}, I_E = 0$	—	—	0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 3\text{V}, I_C = 0$	—	—	0.1	$\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	25	—	—	V
DC Current Gain	$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	20	70	200	—
Saturation Voltage	Collector-Emitter	$I_C = 15\text{mA}, I_B = 1.5\text{mA}$	—	—	0.2	V
	Base-Emitter		—	—	1.5	
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$	—	1.1	1.6	pF
Collector-Base Time Constant	$C_c \cdot r_{bb}'$	$V_{CB} = 10\text{V}, I_C = 1\text{mA}, f = 30\text{MHz}$	—	—	25	ps
Transition Frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	250	600	—	MHz

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