

TENTATIVE

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

HN3C14FT

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

Unit in mm

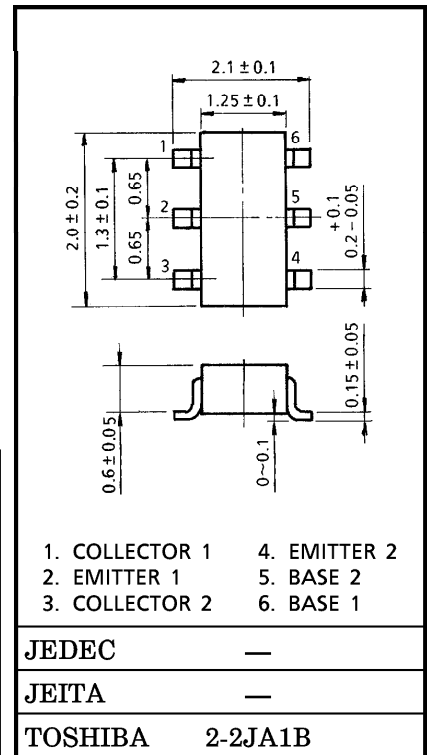
- Two devices are built in to the super-thin and ultra super mini (6 pins) package : TU6

MOUNTED DEVICES

	Q1 / Q2
Three-pins (SSM) mold products are corresponded	2SC5111

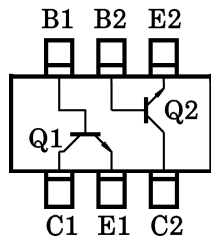
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	20	V
Collector-Emitter Voltage	V _{CE0}	10	V
Emitter-Base Voltage	V _{EB0}	3	V
Collector Current	I _C	60	mA
Base Current	I _B	30	mA
Collector Power Dissipation	P _C	200	mW
Junction Temperature	T _j	125	°C
Storage Temperature Range	T _{stg}	-55~125	°C

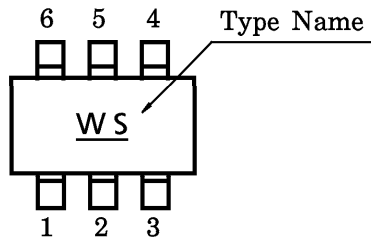


Weight : 0.008 g

PIN ASSIGNMENT (TOP VIEW)



MARKING



ELECTRICAL CHARACTERISTICS (Q1, Q2) (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 10\text{ V}, I_E = 0$	—	—	1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 1\text{ V}, I_C = 0$	—	—	1	μA
DC Current Gain	h_{FE}	$V_{CE} = 5\text{ V}, I_C = 5\text{ mA}$	80	—	240	—
Transition Frequency	f_T	$V_{CE} = 5\text{ V}, I_C = 5\text{ mA}$	3	5	—	GHz
Insertion Gain	$ S_{21e} ^2$ Q1	$V_{CE} = 5\text{ V}, I_C = 5\text{ mA},$ $f = 1000\text{ MHz}$	7	10	—	dB
	$ S_{21e} ^2$ Q2		7.5	10.5	—	dB
Reverse Transfer Capacitance	C_{re} Q1	$V_{CE} = 5\text{ V}, I_E = 0,$ $f = 1\text{ MHz}$ (Note)	—	0.6	1	pF
	C_{re} Q2		—	0.7	1.1	pF
Collector-Base Time Constant	$C_c \cdot r_{bb'}$ Q1	$V_{CE} = 5\text{ V}, I_E = 3\text{ mA},$ $f = 30\text{ MHz}$	—	4.5	15	ps
	$C_c \cdot r_{bb'}$ Q2		—	3.6	14	ps

(Note) : C_{re} is measured by 3 terminal method capacitance bridge.

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