

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

MT6P06E

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

- TWO devices are built in to the super-thin and extreme super mini (6 pins) package : ES6

MOUNTED DEVICES

	Q1 / Q2 : SSM (TESM)
Three-pins (SSM / TESM) mold products are corresponded.	MT3S06S (MT3S06T)

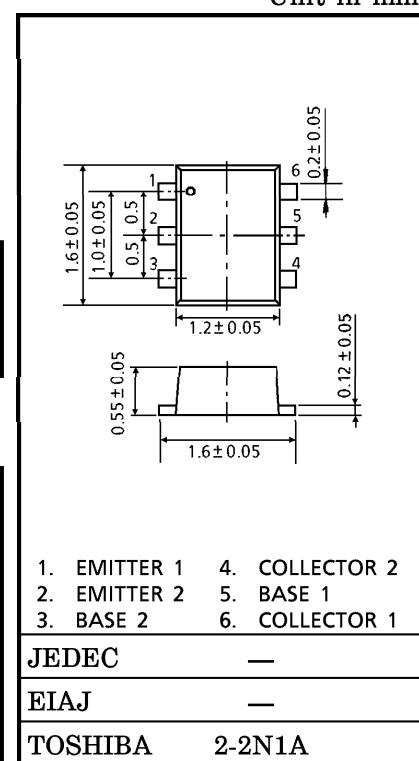
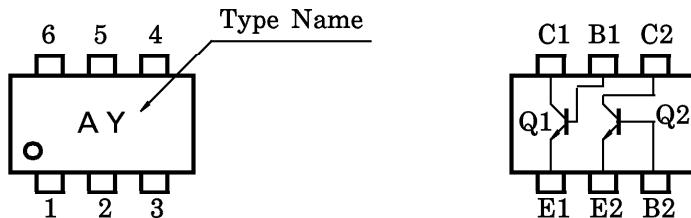
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	Q1 / Q2	UNIT
Collector-Base Voltage	V _{CBO}	10	V
Collector-Emitter Voltage	V _{CEO}	5	V
Emitter-Base Voltage	V _{EBO}	1.5	V
Collector Current	I _C	15	mA
Base Current	I _B	7	mA
Collector Power Dissipation	P _C (Note 1)	100	mW
Junction Temperature	T _j	125	°C
Storage Temperature Range	T _{stg}	-55~125	°C

(Note 1) : Total power dissipation of Q1 and Q2.

MARKING

PIN ASSIGNMENT (TOP VIEW)



Weight : 0.003 g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CBO}	V _{CB} = 5 V, I _E = 0	—	—	0.1	μA
Emitter Cut-off Current	I _{EBO}	V _{EB} = 1 V, I _C = 0	—	—	1	μA
DC Current Gain	h _{FE}	V _{CE} = 1 V, I _C = 5 mA	70	—	140	—
Transition Frequency	f _T	V _{CE} = 3 V, I _C = 5 mA	7	10	—	GHz
Insertion Gain	S _{21e} ² (1)	V _{CE} = 1 V, I _C = 5 mA, f = 2 GHz	—	7.5	—	dB
	S _{21e} ² (2)	V _{CE} = 3 V, I _C = 7 mA, f = 2 GHz	4.5	8	—	dB
Noise Figure	NF (1)	V _{CE} = 1 V, I _C = 3 mA, f = 2 GHz	—	1.7	3	dB
	NF (2)	V _{CE} = 3 V, I _C = 3 mA, f = 2 GHz	—	1.6	3	dB
Reverse Transfer Capacitance	C _{re}	V _{CB} = 1 V, I _E = 0, f = 1 MHz (Note 2)	—	0.35	0.75	pF

(Note 2) : C_{re} is measured by 3 terminal method with capacitance bridge.

HANDLING PRECAUTION

When handling individual devices (which are not yet mounting on a circuit board), be sure that the environment is protected against electrostatic electricity. Operators should wear anti-static clothing, and containers and other objects that come into direct contact with devices should be made of anti-static materials.