

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

HN2C10FU

VHF~UHF BAND LOW NOISE AMPLIFIER APPLICATIONS

Unit in mm

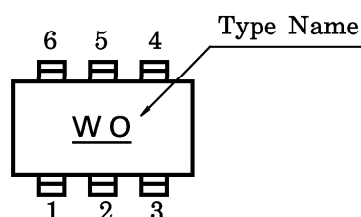
- Including Two Devices in US6 (Ultra Super Mini Type with 6 Leads)

MAXIMUM RATINGS (Ta = 25°C)

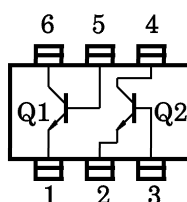
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	20	V
Collector-Emitter Voltage	V _{CEO}	12	V
Emitter-Base Voltage	V _{EB0}	3	V
Base Current	I _B	40	mA
Collector Current	I _C	80	mA
Collector Power Dissipation	P _C *	200	mW
Junction Temperature	T _j	125	°C
Storage Temperature Range	T _{stg}	-55~125	°C

* : Total

MARKING



PIN ASSIGNMENT (TOP VIEW)



1. EMITTER 1 (E1)	
2. EMITTER 2 (E2)	
3. BASE 2 (B2)	
4. COLLECTOR 2 (C2)	
5. BASE 1 (B1)	
6. COLLECTOR 1 (C1)	
JEDEC	—
EIAJ	—
TOSHIBA	2-2J1B

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I _{CBO}	V _{CB} = 10V, I _E = 0	—	—	1	μA
Emitter Cut-off Current	I _{EBO}	V _{EB} = 1V, I _C = 0	—	—	1	μA
DC Current Gain	h _{FE}	V _{CE} = 10V, I _C = 20mA	80	—	240	—
Transition Frequency	f _T	V _{CE} = 10V, I _C = 20mA	5	7	—	GHz
Insertion Gain	S _{21e} ²	V _{CE} = 10V, I _C = 20mA, f = 1GHz	8.5	11.5	—	dB
Noise Figure	NF	V _{CE} = 10V, I _C = 5mA, f = 1GHz	—	1.1	2	dB
Reverse Transfer Capacitance Q1	C _{re}	V _{CB} = 10V, I _E = 0, f = 1MHz (Note)	—	0.55	1.05	pF
Reverse Transfer Capacitance Q2	C _{re}		—	0.6	1.1	pF

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

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