

μPA800T

The μPA800T has built-in 2 low-voltage transistors which are designed to amplify low noise in the VHF band to the UHF band.

FEATURES

- Low Noise
NF = 1.9 dB TYP. @ f = 2 GHz, V_{CE} = 1 V, I_c = 3 mA
- High Gain
|S_{21e}|² = 6.5 dB TYP. @ f = 2 GHz, V_{CE} = 1 V, I_c = 3 mA
- A Mini Mold Package Adopted
- Built-in 2 Transistors (2 × 2SC4228)

ORDERING INFORMATION

PART NUMBER	QUANTITY	PACKING STYLE
μPA800T	Loose products (50 PCS)	Embossed tape 8 mm wide. Pin 6 (Q1 Base), Pin 5 (Q2 Base), Pin 4 (Q2 Emitter) face to perforation side of the tape.
μPA800T-T1	Taping products (3 KPCS/Reel)	

Remark If you require an evaluation sample, please contact an NEC Sales Representative. (Unit sample quantity is 50 pcs.)

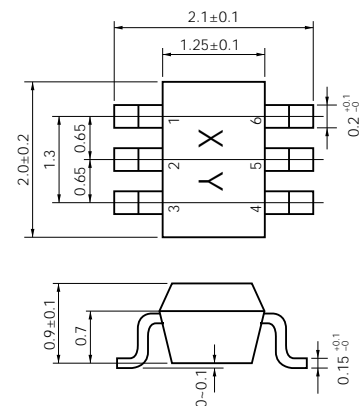
ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C)

PARAMETER	SYMBOL	RATING	UNIT
Collector to Base Voltage	V _{CBO}	20	V
Collector to Emitter Voltage	V _{CEO}	10	V
Emitter to Base Voltage	V _{EBO}	1.5	V
Collector Current	I _c	35	mA
Total Power Dissipation	P _T	150 in 1 element 200 in 2 elements ^{Note}	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-65 to +150	°C

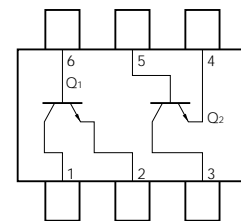
Note 110 mW must not be exceeded in 1 element.

PACKAGE DRAWINGS

(Unit: mm)



PIN CONFIGURATION (Top View)



PIN CONNECTIONS

- | | |
|-------------------|-----------------|
| 1. Collector (Q1) | 4. Emitter (Q2) |
| 2. Emitter (Q1) | 5. Base (Q2) |
| 3. Collector (Q2) | 6. Base (Q1) |

**ELECTRICAL CHARACTERISTICS (T_A = 25 °C)**

PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cutoff Current	I _{CBO}	V _{CB} = 10 V, I _E = 0			1.0	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} = 1 V, I _C = 0			1.0	μA
DC Current Gain	h _{FE}	V _{CE} = 3 V, I _C = 5 mA ^{Note 1}	80		200	
Gain Bandwidth Product	f _T	V _{CE} = 3 V, I _C = 5 mA	5.5	80		GHz
Feed-back Capacitance	C _{re}	V _{CB} = 3 V, I _E = 0, f = 1 MHz ^{Note 2}			0.7	pF
Insertion Power Gain (1)	S _{21e} ²	V _{CE} = 1 V, I _C = 3 mA, f = 2 GHz	4.5	6.5		dB
Insertion Power Gain (2)	S _{21e} ²	V _{CE} = 3 V, I _C = 5 mA, f = 2 GHz	5.5	7.5		dB
Noise Figure (1)	NF	V _{CE} = 1 V, I _C = 3 mA, f = 2 GHz		1.9	3.2	dB
Noise Figure (2)	NF	V _{CE} = 3 V, I _C = 5 mA, f = 2 GHz		1.9	3.2	dB

Notes 1. Pulse Measurement: P_w ≤ 350 μs, Duty cycle ≤ 2 %

2. Measured with 3-pin bridge, emitter and case should be connected to guard pin of bridge.

h_{FE} CLASSIFICATION

Rank	KB
Marking	RL
h _{FE} Value	80 to 200