

isc Silicon NPN RF Transistor

UPA805T

DESCRIPTION

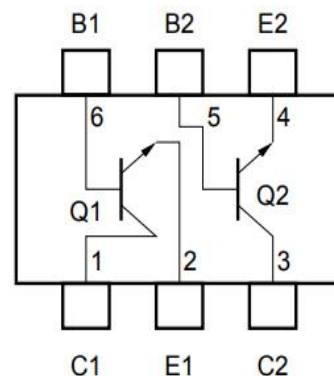
- With SOT-363 packaging
- Low voltage use
- Ultra super mini mold package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in low noise and small signal amplifiers from VHF band to UHF band

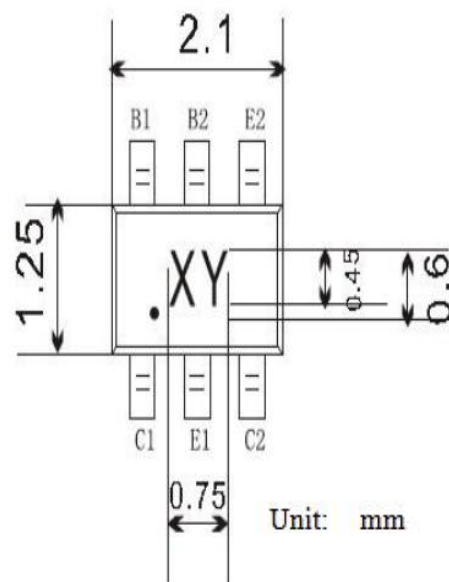
ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	9	V
V_{CEO}	Collector-Emitter Voltage	6	V
V_{EBO}	Emitter-Base Voltage	2	V
I_C	Collector Current-Continuous	10	mA
P_C	Collector Power Dissipation @ $T_c=25^{\circ}\text{C}$	120	mW
T_J	Max.Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-60~150	$^{\circ}\text{C}$



PIN CONNECTIONS

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



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ELECTRICAL CHARACTERISTICS

T_c=25℃ unless otherwise specified, Pulse Measurement PW ≤ 350 μs, Duty Cycle ≤ 2 %

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I _{CBO}	Collector Cutoff Current	V _{CB} = 5V; I _E = 0			0.1	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 1V; I _C = 0			0.1	μ A
h _{FE}	DC Current Gain	I _C = 5mA ; V _{CE} = 3V	90		150	
f _T	Current-Gain—Bandwidth Product	I _C = 7mA ; V _{CE} = 3V ;f=2.0GHz		12		GHz
C _{re}	Feed-Back Capacitance	I _E = 0 ; V _{CB} = 3V;f= 1.0MHz		0.4	0.5	pF
S _{21e} ²	Insertion Power Gain	I _C = 5mA ; V _{CE} = 3V;f= 2.0GHz	7	9		dB
NF	Noise Figure	I _C = 3mA ; V _{CE} = 3V;f= 1.0GHz		2	4.0	dB

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