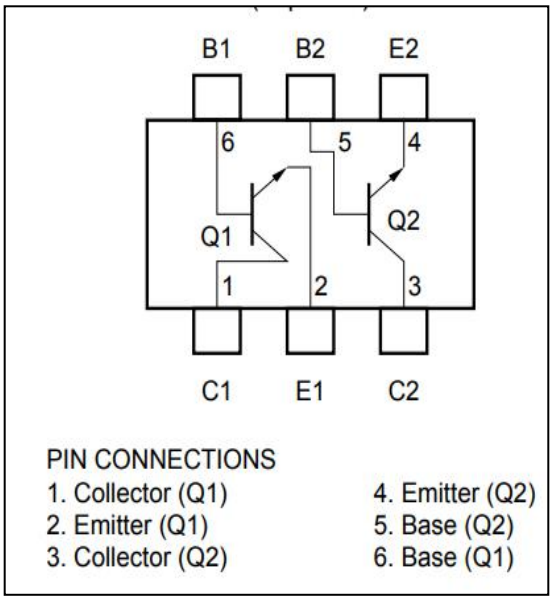
isc Silicon NPN RF Transistor — UPA805T

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

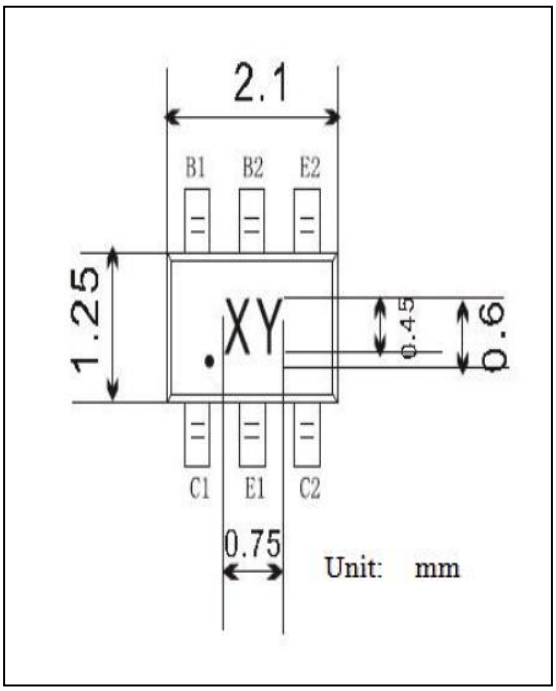


PIN CONNECTIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	120	mW
T_J	Max.Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-60~150	℃



isc Silicon NPN RF Transistor UPA805T

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	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 1V; I_C= 0			0.1	μA
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