Recommended Operating Condition at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Supply Voltage	V_{C1E1}		1.2	3	6	V
	V_{C2E1}		1.2	3	6	V
	V_{C1E2}		1.2	3	6	V
	V_{C2E2}		1.2	3	6	V

Electrical Characteristics at Ta=25°C

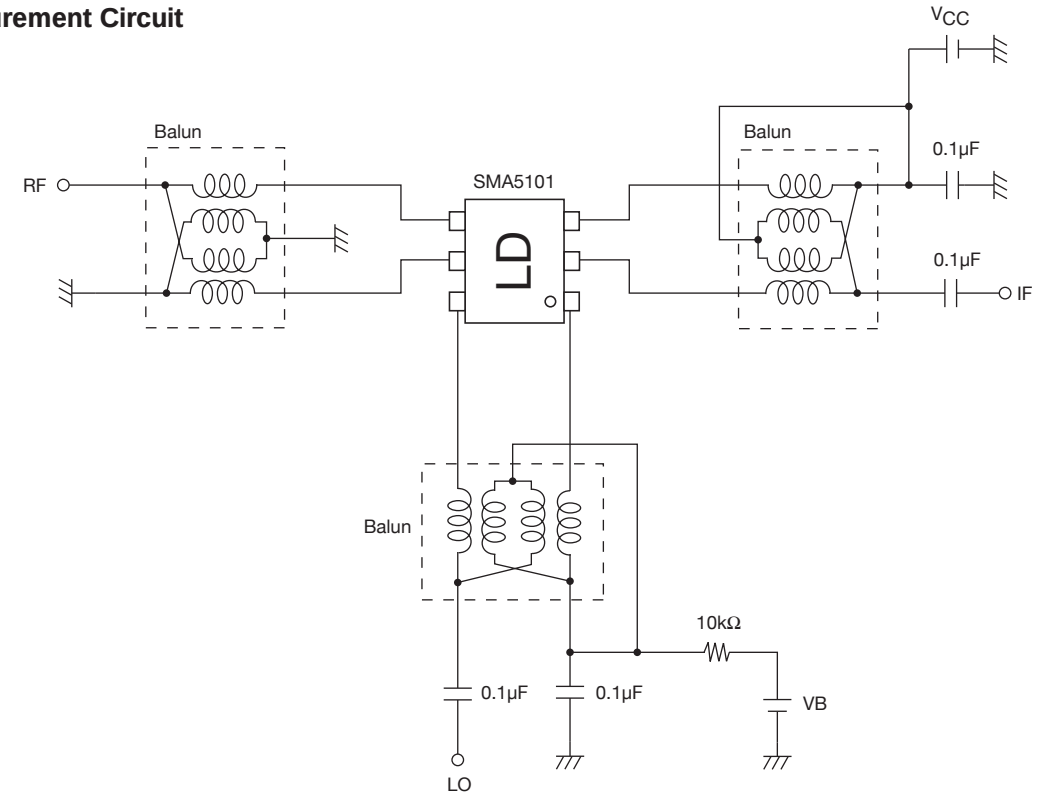
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{C1B1O}	V_{C1B1}=5V			1	μA
	I_{C2B1O}	V_{C2B1}=5V			1	μA
	I_{C1B2O}	V_{C1B2}=5V			1	μA
	I_{C2B2O}	V_{C2B2}=5V			1	μA
Emitter Cutoff Current	I_{E1B1O}	V_{E1B1}=1V			1	μA
	I_{E2B1O}	V_{E2B1}=1V			1	μA
	I_{E1B2O}	V_{E1B2}=1V			1	μA
	I_{E2B2O}	V_{E2B2}=1V			1	μA
DC Current Gain	h_{FE1}	V_{C1E1}=1V, I_{C1E1}=3mA	20		120	
	h_{FE2}	V_{C2E1}=1V, I_{C2E1}=3mA	20		120	
	h_{FE3}	V_{C1E2}=1V, I_{C1E2}=3mA	20		120	
	h_{FE4}	V_{C2E2}=1V, I_{C2E2}=3mA	20		120	
Conversion Gain *1	Gc	V_{CC}=5V, I_{CC}=6mA, f(RF)=450MHz, f(LO)=500MHz, P(RF)=−15dBm, P(LO)=−6dBm		−0.5		dB
Input Intercept Point *1	IIP3	V_{CC}=5V, I_{CC}=6mA, f(RF1)=450MHz, f(RF2)=451MHz, f(LO)=500MHz, P(RF1)=P(RF2)=−15dBm, P(LO)=−6dBm		15		dBm

*1 : On evaluation board

Ordering Information

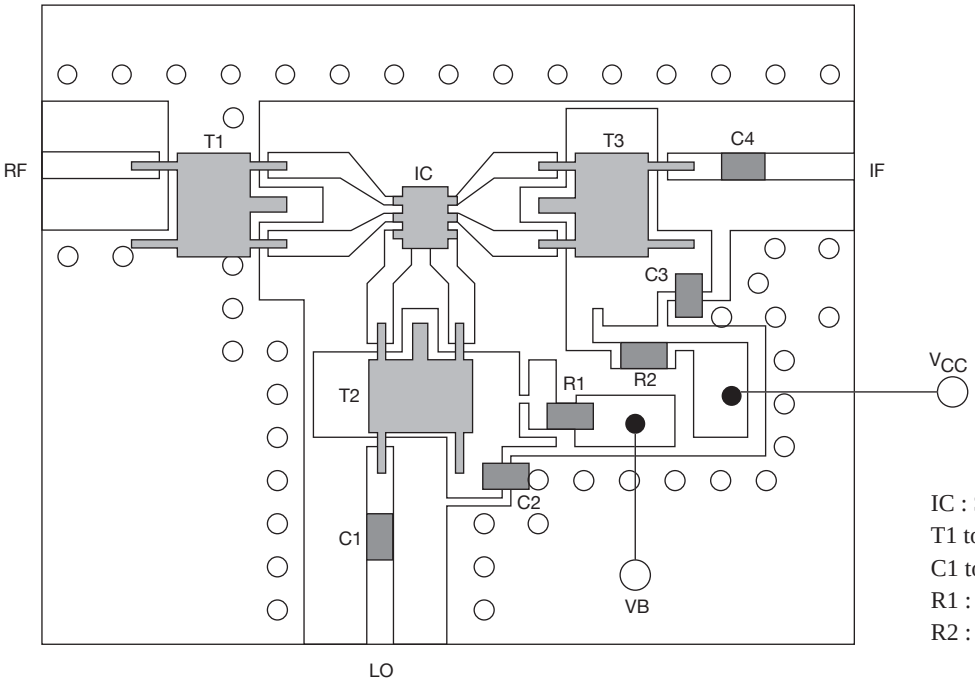
Device	Package	Shipping	memo
SMA5101-TL-H	MCPH6	3,000pcs./reel	Pb Free and Halogen Free

Measurement Circuit



IT15507

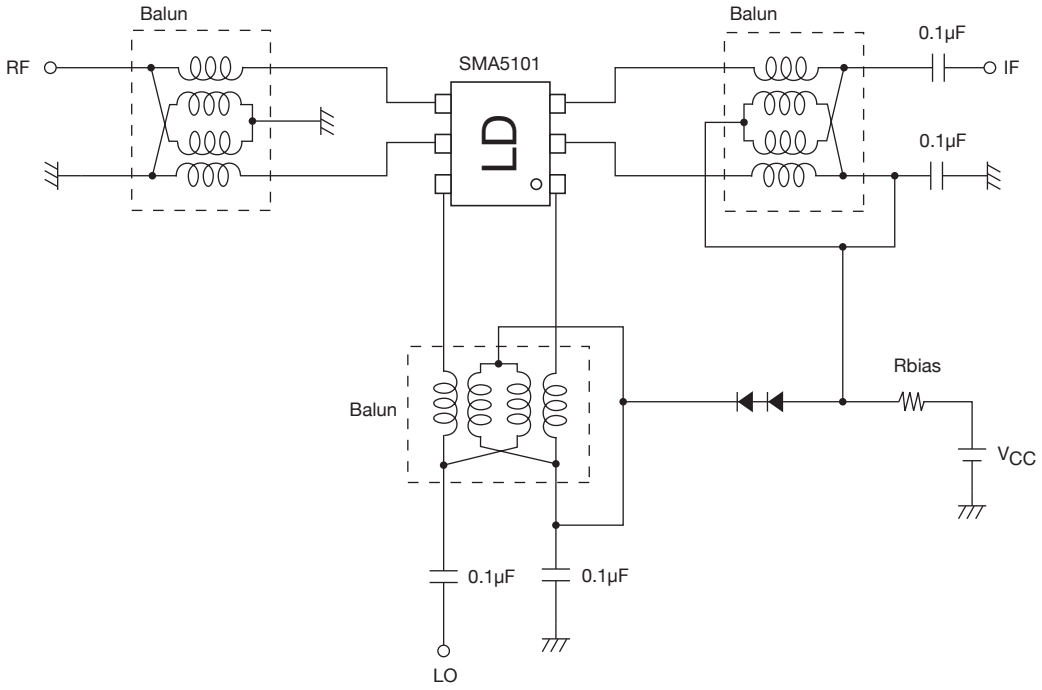
Evaluation Board



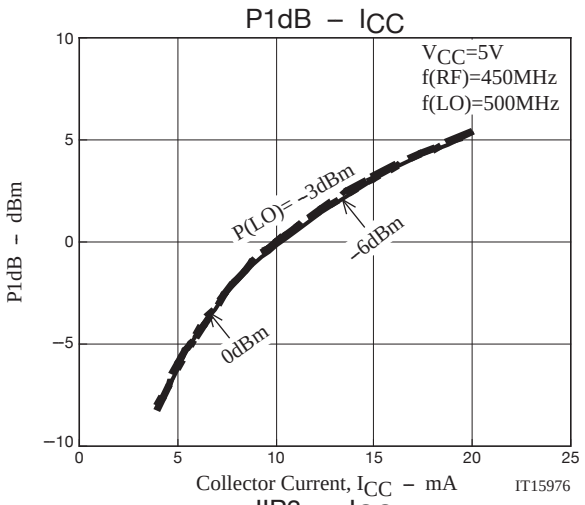
IC : SMA5101
T1 to T3 : Balun
C1 to C4 : 0.1μF
R1 : 10kΩ
R2 : 0Ω (short)

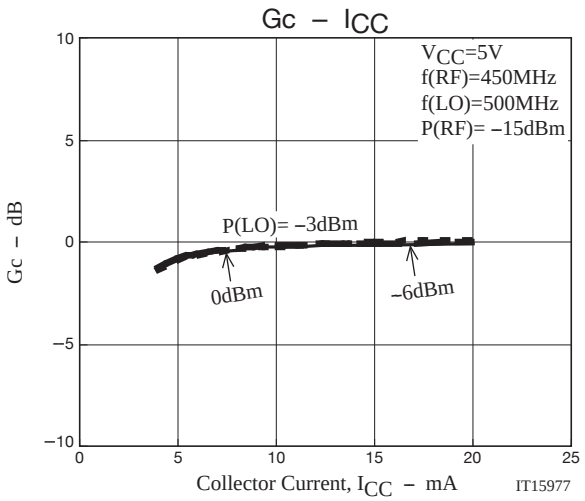
IT15508

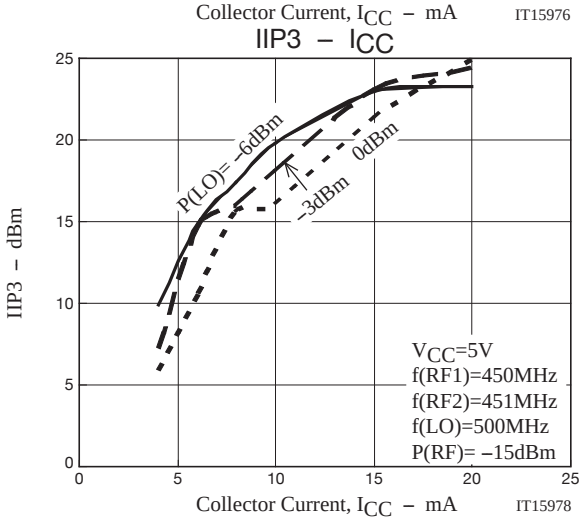
Circuit Example (Self Bias)



IT15509







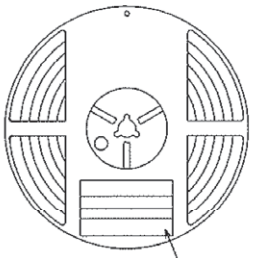
Embossed Taping Specification

SMA5101-TL-H

1. Packing Format

Package Name	Carrier Tape Type	Maximun Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
MCPH6	MCP4	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

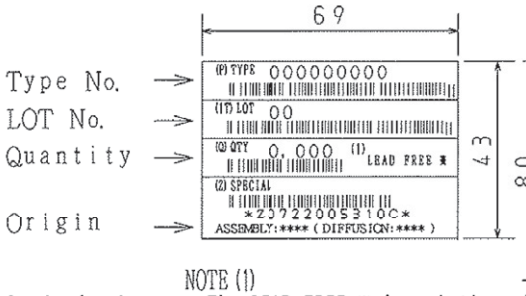
Packing method



Reel label

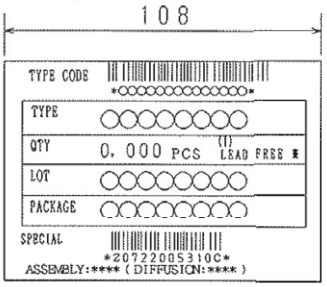
Reel label, Inner box label

(unit:mm)



Outer box label

It is a label at the time of factory shipments. The form of a label may change in physical distribution process.

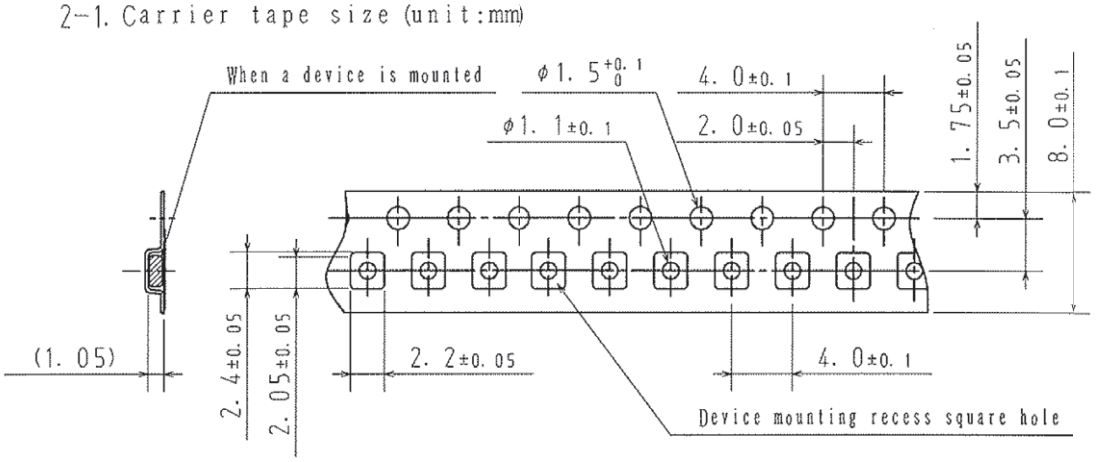


NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

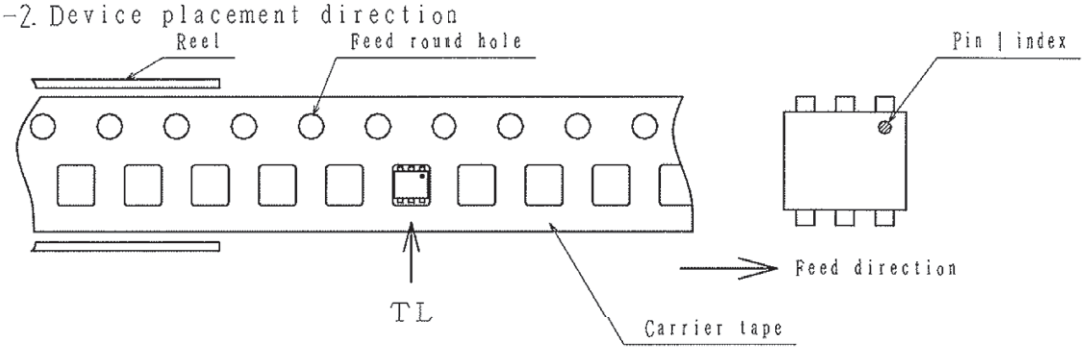
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



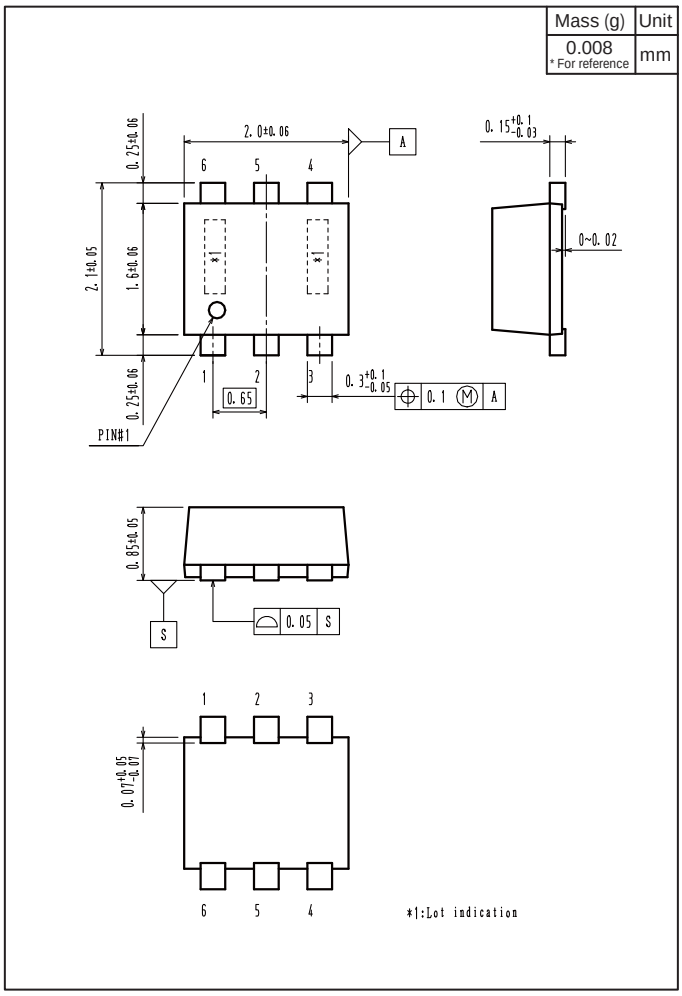
2-2. Device placement direction



Those with pin 1 index on the feed hole side·····TL

Outline Drawing

SMA5101-TL-H



Land Pattern Example