

# Tentative Specification (Under Development)

Control No. : GSC-03513-A 1/4

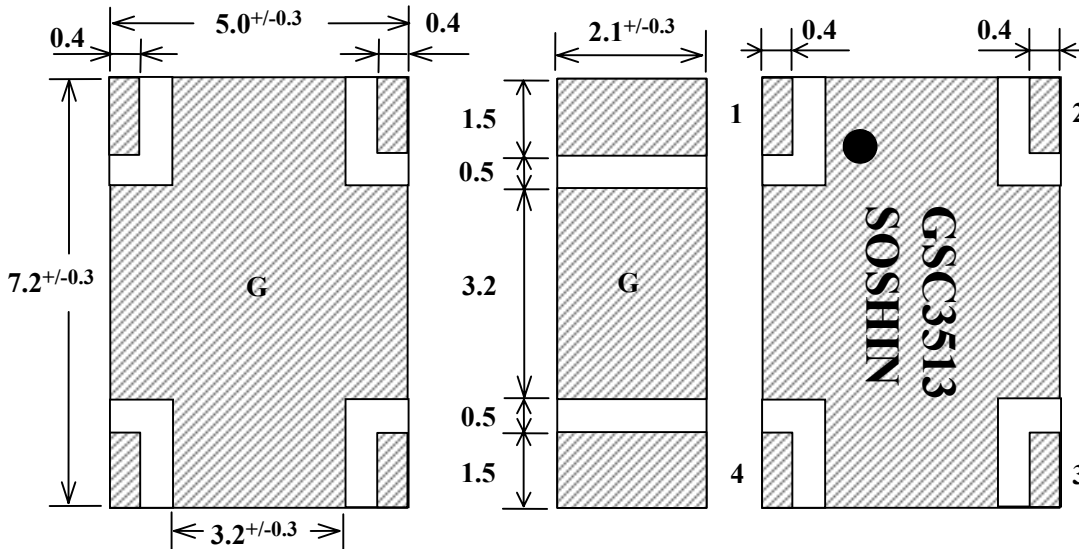
Established on Nov 5, 2009

## 1. 940MHz Band 90deg Chip Asymmetric Divider

1.1 TYPE No. : GSC3513-46A0940      RoHS correspondence article

## 2. Appearance and Construction

### 2.1 Dimension (Unit: mm)



Terminal	
1	IN
2	0 deg 4.6dB OUT (Coupling)
3	90deg OUT (Through)
4	ISOLAIONT
G	GND

Tolerance: +/-0.2

### 2.2 Body ... Ceramics

### 2.3 Terminal ... Ni+Sn plating

### 2.4 Marking ... Abbreviation of Model No. and trademark is printed

## 3. Absolute Maximum Ratings

3.1 Input Power (W Avg/CW)	:	200
3.2 Operating Temperature (Degree)	:	-40 ~ 125
3.3 Storage Temperature (Degree)	:	-40 ~ 85
		(-20 ~ 35deg for tape and reel materials)

## 4. Electrical Characteristics (Ta=25deg)

4.1 Impedance (Ohm Nominal)	:	50
4.2 Frequency Range (MHz)	:	840 ~ 1040
4.3 Insertion Loss (dB MAX)	:	0.25 (TYP. 0.17)
	:	0.35 (-40 ~ 125deg)
4.4 Coupling (dB)	:	4.6+/-0.5
	:	4.6+/-0.6 (-40 ~ 125deg)
4.5 Phase Balance (Degree)	:	90+/-3
4.6 V.S.W.R (MAX)	:	1.2
4.7 Isolation (dB MIN)	:	20

## 5. Note

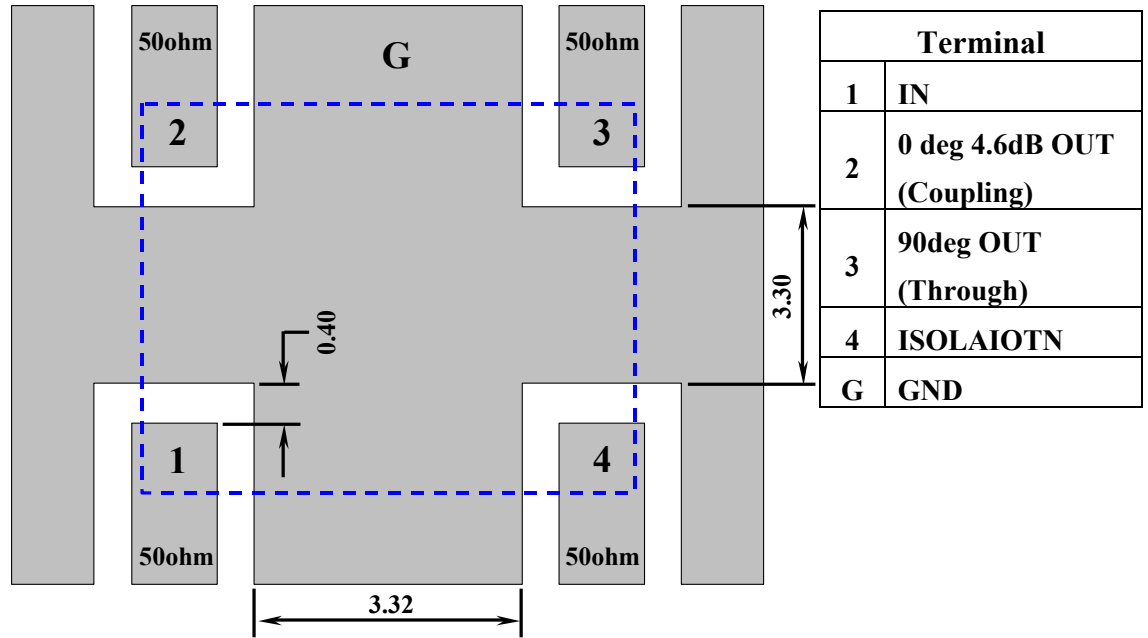
### 5.1 Number of pieces ordered

At least 500 pieces must be ordered for serial production.

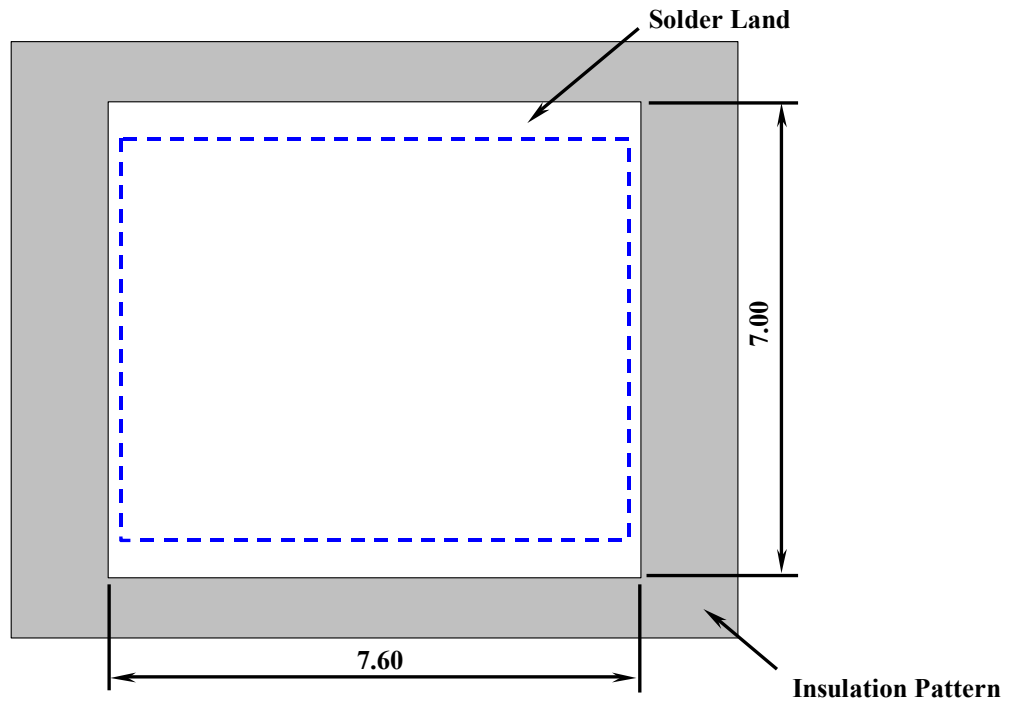
\*Specifications of products are subject to change without notice

**6. Foot pattern**

(Example :  $\epsilon=2.6, t=0.8\text{mm}$  Double side printed circuit board)



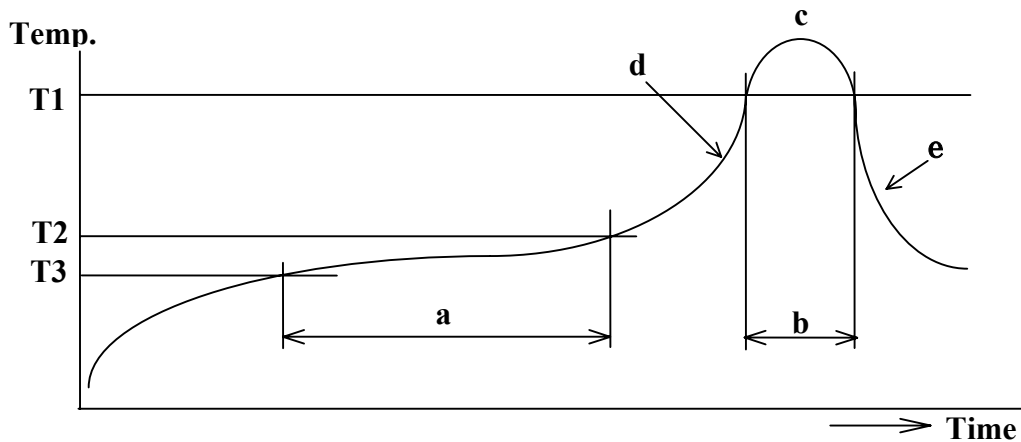
**7. Resist pattern**



**! Please do not screw close to this component. Unnecessary pressure causes a failure.**

## 8. Recommended use conditions

### Reflow soldering conditions



#### (1) High temperature reflow conditions

(Products may be put through reflow oven 2 times maximum.)

T1: 230deg, T2: 180deg, T3: 150deg

a: Preheating for 60 - 120 seconds,

b: Heating for 30 - 50 seconds,

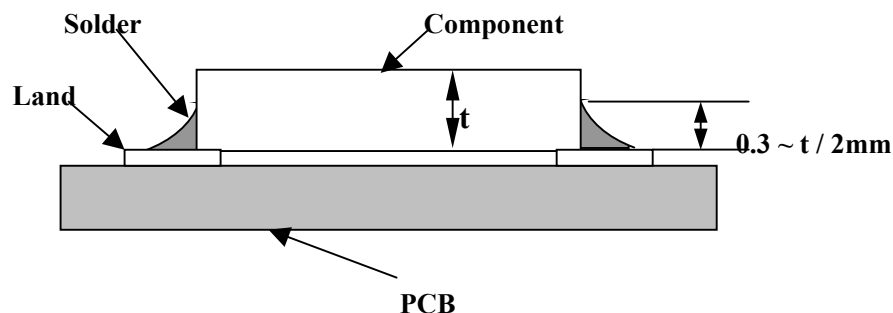
c: Peak temperature 260 $\pm$ 5deg, 5 - 10 seconds

d: Temperature ramp-up slope - 10deg, max./1 sec.

e: Temperature ramp-down slope - 8deg, max./1 sec.

#### (2) Solder build-up

Formation of a solder fillet measuring 0.3 mm or up to a half of the product thickness ( $t$ ) at edges of external electrode must be ascertained. Solder build-up which is shorter or greater than this dimension may cause detrimental effects on the mechanical strength and/or variation in electrical performance.



Example) When a 0.3 mm thick solder mask is used, fillets will be about 0.95 mm

**\* Cleaning conditions**

Cleaning fluid	:	isopropyl alcohol
Dip cleaning	:	No longer than 30 minutes at 40deg
Steam cleaning	:	30 minutes, max.
Ultrasonic cleaning	:	No longer than 1 minute with 10W output

**! Caution**

- \* Application of excessive output power will cause PCBs to resonate, resulting in damage to mounted components.
- \* Ultrasonic cleaning conditions are dependent on the size of the soldering bath and PCBs being cleaned.
- \* Drying immediately after cleaning is essential.

**9. Manual soldering rework conditions****(1) Pre-heating**

Pre-heating must be sufficient so  $\Delta t$ , or the temperature difference between solder and component surfaces, will be  $\Delta t < 100\text{deg}$ .

**(2) Use of soldering irons may proceed only under the following conditions:**

- a) Soldering iron tip temperature : 290deg, max.
- b) Soldering iron capacity : 20W, max.
- c) Shape of soldering iron tip : 3 mm dia., approx.
- d) Soldering duration : 3 seconds, max.
- e) Soldering times : 2 times, max.

**! Consideration must be given so that no mechanical stress may be applied to the components.**

**10. Other items**

- (1) This product is outside of item 2 of paragraph 7 in annexed table 1 to the Export Control Order, and also of the strategic goods (service) category.
- (2) This product is free from use of ozone layer depleting substances and/or brominated flame retardant materials in either materials or during production.
- (3) This product is designed for application in electronic equipment intended for use in normal environmental conditions(room temperature, humidity and atmospheric pressure).Application of this product under conditions other than the above, as stated below, will deteriorate its physical properties resulting in electrical shock and burnout
  - a) Certain gaseous atmosphere (chloride, ammonia, sulfur oxide, nitrogen oxide)
  - b) Volatile/flammable gaseous atmosphere
  - c) Dust-prone environment
  - d) Environment exposed to water sprays, and/or subject to condensation, direct sunlight or freezing