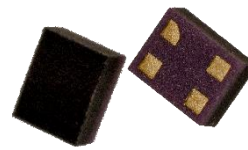


Datasheet for

SAW Components

GNSS1.5G

Single Filter



Product ID: LAS1602H1K

Date: Feb. 24, 2023

Revision: 1.1

Features

- ◆ Package Size: 0.9 x 0.7 x 0.55 max mm
- ◆ Single-Ended Input and Output
- ◆ Terminating Impedance: 50 Ω
- ◆ Moisture Sensitivity Level 3
- ◆ ESD Sensitive Device
- ◆ World Smallest PKG Size

Electrical Specifications

GNSS1.5G Single Filter

Temperature Range for Specification: -30 to +85 ° C

Input to Output					Min.	Typ.	Max.	Unit
Insertion Loss								
	1559.05	-	1563.15	MHz	-	1.2	1.8	dB
	1574.39	-	1576.45	MHz	-	0.8	1.3	dB
	1597.55	-	1605.89	MHz	-	1.3	2.0	dB
Group Delay Ripple								
	1597.55	-	1605.89	MHz	-	2	15	nsec
Pass Band Ripple								
	1559.05	-	1563.15	MHz	-	0.1	1.0	dB
	1574.39	-	1576.45	MHz	-	0.1	0.5	dB
	1597.55	-	1605.89	MHz	-	0.4	1.1	dB
VSWR Input								
	1559.05	-	1563.15	MHz	-	1.4	1.8	-
	1574.39	-	1576.45	MHz	-	1.1	1.8	-
	1597.55	-	1605.89	MHz	-	1.4	1.8	-
VSWR Output								
	1559.05	-	1563.15	MHz	-	1.4	1.8	-
	1574.39	-	1576.45	MHz	-	1.1	1.8	-
	1597.55	-	1605.89	MHz	-	1.4	1.8	-
Absolute Attenuation								
	10	-	925	MHz	33	36	-	dB
	777	-	798	MHz	33	36	-	dB
	814	-	915	MHz	33	36	-	dB
	925	-	960	MHz	33	36	-	dB
	1427	-	1463	MHz	40	45	-	dB
	1710	-	1785	MHz	36	40	-	dB
	1786	-	1797	MHz	36	40	-	dB
	1850	-	1910	MHz	36	40	-	dB
	1910	-	1980	MHz	36	40	-	dB
	2010	-	2025	MHz	37	41	-	dB
	2305	-	2315	MHz	38	41	-	dB
	2401	-	2483	MHz	41	45	-	dB
	2500	-	2570	MHz	42	46	-	dB
	3300	-	3800	MHz	35	42	-	dB
	3300	-	4200	MHz	32	39	-	dB
	4400	-	5000	MHz	28	35	-	dB
	5150	-	5950	MHz	26	32	-	dB

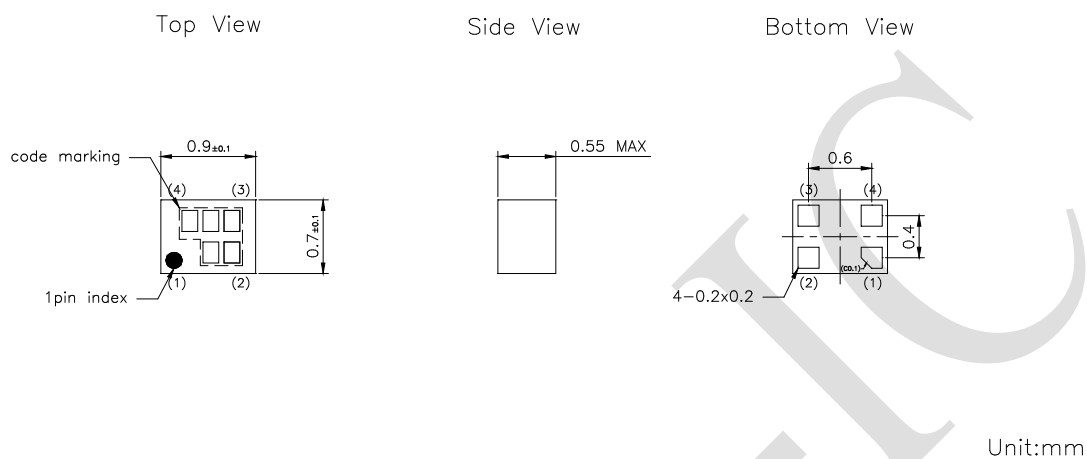
Maximum Ratings

Item	Rating	Condition / Remark
Storage Temperature	-40 to +85 ° C	
DC Voltage	5 V	+25 ° C
Input power	+15 dBm	LTE, +55 ° C, 5000 h

Recommended Operating Conditions

Item	Rating	Condition / Remark
Operating Temperature, T _{CASE}	-30 to +85 ° C	

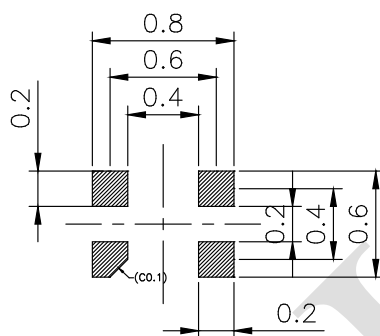
Package Information



Pin Configuration

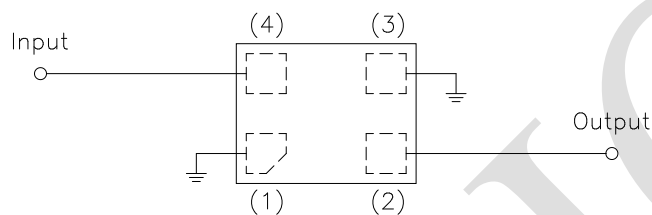
2	:	Output
4	:	Input
Others	:	GND

Land Pattern



Unit:mm

Application Circuit



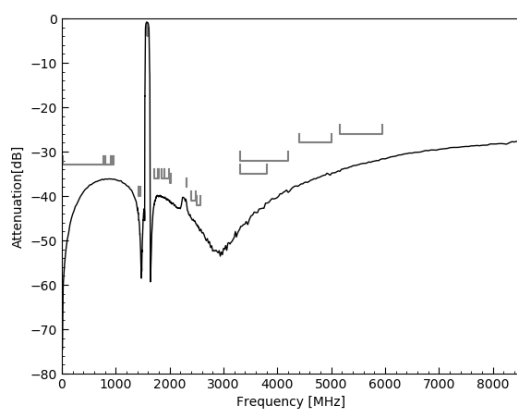
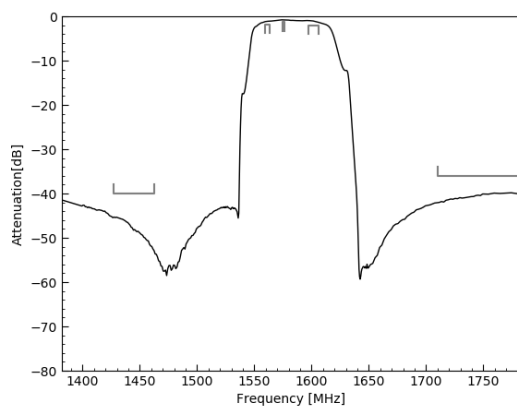
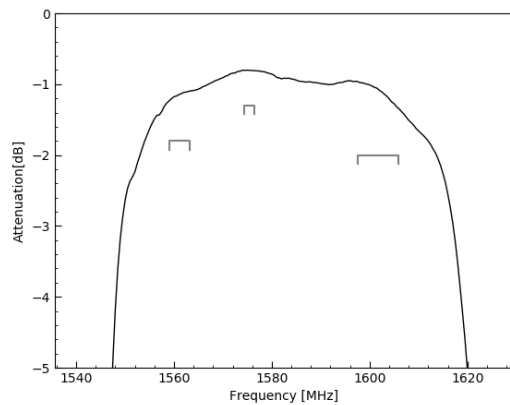
Port	Terminating Z	Matching Component		
Input	50 Ω			
Output	50 Ω			

For ESD protection, external shunt inductor at all ports is recommended.

Electrical Characteristics

GNSS1.5G Single Filter

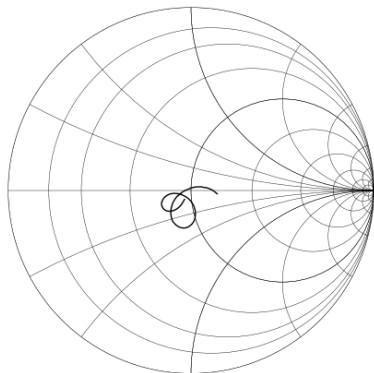
Input to Output



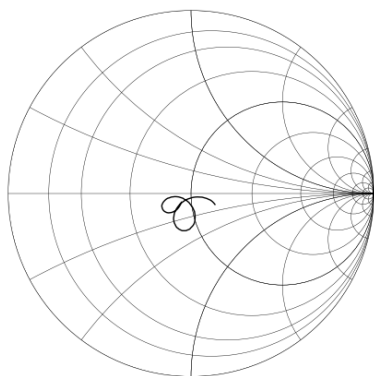
Electrical Characteristics

GNSS1.5G Single Filter

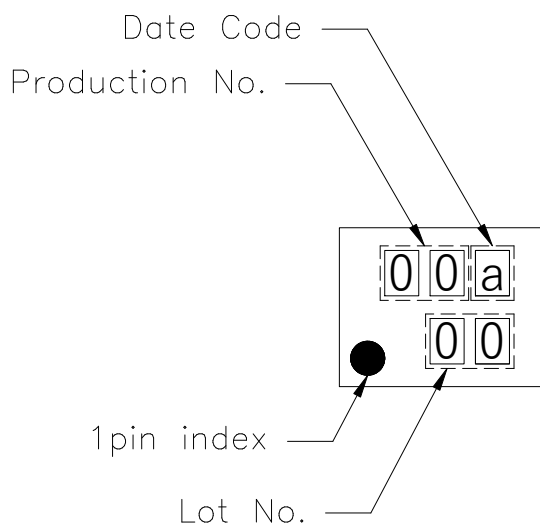
Input Port Impedance



Output Port Impedance



Marking Information



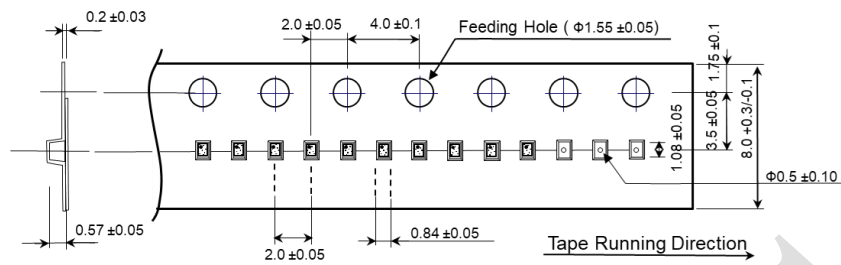
Product No. : 1K

Lot No. (Indicated by 0 ~ 9 or A to Z and a to z, except I, O, i, o and l)

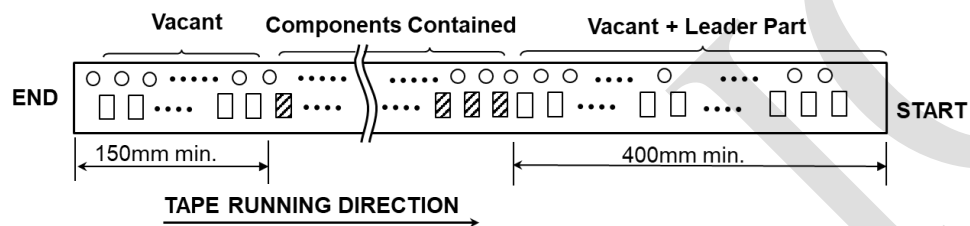
Product date code:

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	a	b	c	d	e	f	g	h	j	k	l	m
2023	n	p	q	r	s	t	u	v	w	x	y	z
2024	A	B	C	D	E	F	G	H	J	K	L	M
2025	N	P	Q	R	S	T	U	V	W	X	Y	Z

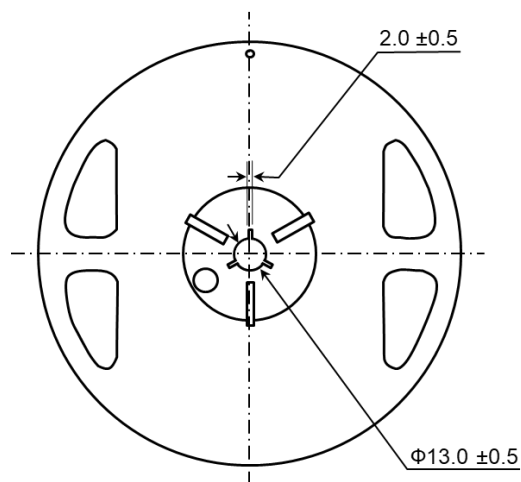
Tape Information



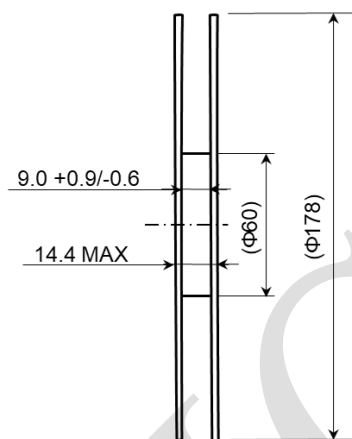
UNIT: mm



Reel Information



$\Phi 178$ Reel Dimension



UNIT: mm

Ordering Code

Part Number	Description
LAS1602H1K-SA	Bulk (few pieces)
LAS1602H1K-MB	Tape & Reel 3,000 pcs/reel
LAS1602H1K-MC	Tape & Reel 10,000 pcs/reel
LAS1602H1K-SZ	EVB

Sanan-IC

Revision History

Revision	Date	Description
0.1	May 27, 2022	● Initial release
0.2	Oct. 14, 2022	● Updated Electrical Specifications, Electrical Characteristics and Tape/Reel Information
1.0	Nov. 28, 2022	● Updated Electrical Specifications and Electrical Characteristics
1.1	Feb. 24, 2023	● MP

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