

Datasheet of SAW Device

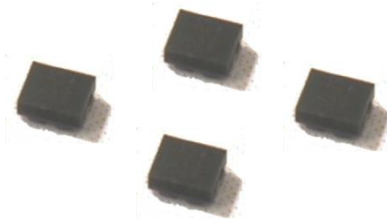
SAW Single Filter

for GPS_GLONASS_BEIDOU / Unbalanced /
5pin /1109

Murata PN: SAFPA1G56AA0F0A

■ Feature

- AEC-Q200 Tested
- -40 to +105 deg.C Operation
- Low Loss for Triple Band GNSS



Note : Please read caution at the end of this document.

SAFPA1G56AA0F0A (GPS_GLONASS_BEIDOU / Unbalanced / 5pin / 1109)

Revision Number	Date	Description
SAFPA1G56AA0F0A_rev.A	Jun -01-2015	■ Initial Release
SAFPA1G56AA0F0A_rev.B	Aug-25-2015	■ Updated SPEC
SAFPA1G56AA0F0A_rev.C	Sep-11-2015	■ Updated for MP
SAFPA1G56AA0F0A_rev.D	Sep-30-2015	■ Updated Carrier Tape Information
SAFPA1G56AA0F0A_rev.E	Jan-29-2016	■ Updated Matching Circuit
SAFPA1G56AA0F0A_rev.F	Mar-09-2017	■ Updated Dimentions

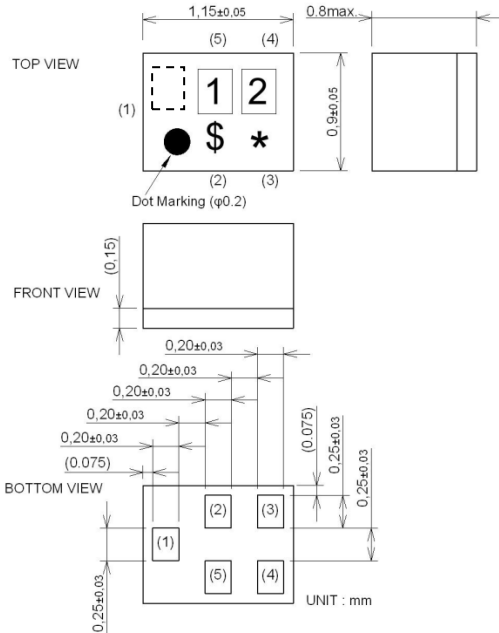
- Operating temperature : -40 to +105 deg.C
- Storage temperature : -40 to +105 deg.C
- Input Power : +13 dBm 2000 h
- D.C. Volatage between the terminals : 3V (25+/-2 deg.C)
- Minimum Resistance between the terminal : 10M ohm
- RoHS compliance : Yes

ESD (ElectroStatic Discharge) sensitive device.
 Contact us before using the component in the molding condition.

Package Dimensions & Recommended Land Pattern

unit: mm

Dimensions



Marking : Laser Printing

* : Month code(Refer to the table A)

\$: Date code(Refer to the table B)

1 : g

2 : 3

Terminal Number

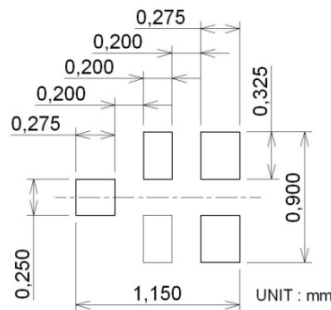
(1) : Unbalanced port

(4) : Unbalanced port

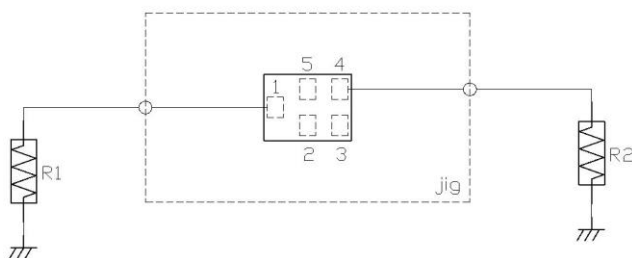
Others : GND

Notice) Please refer to Measurement Circuit for Port information in detail.

Land Pattern



Measurement Circuit (Top Thru View)



R1 : 50 ohm	
R2 : 50 ohm	

SAFPA1G56AA0F0A (GPS_GLONASS_BEIDOU / Unbalanced / 5pin / 1109)

Electrical Characteristic < Single Filter >

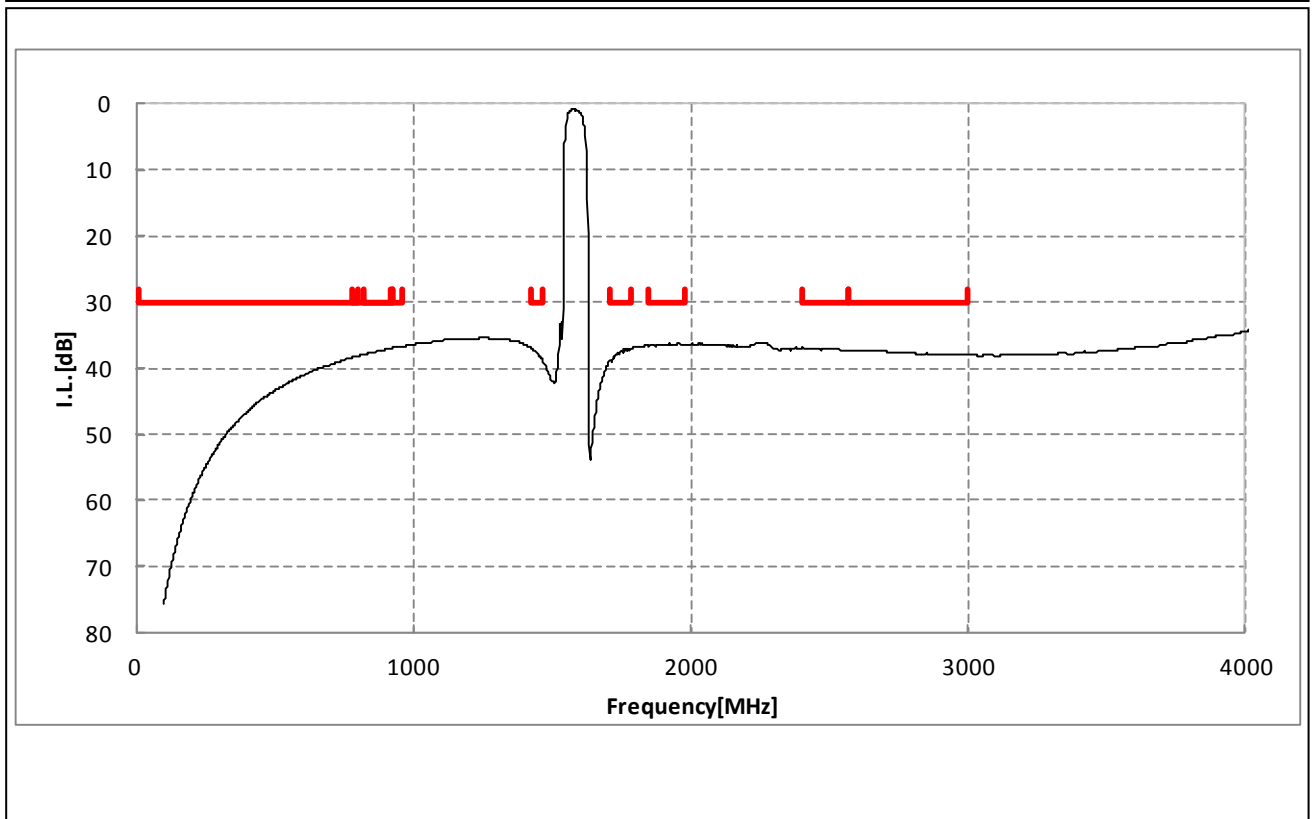
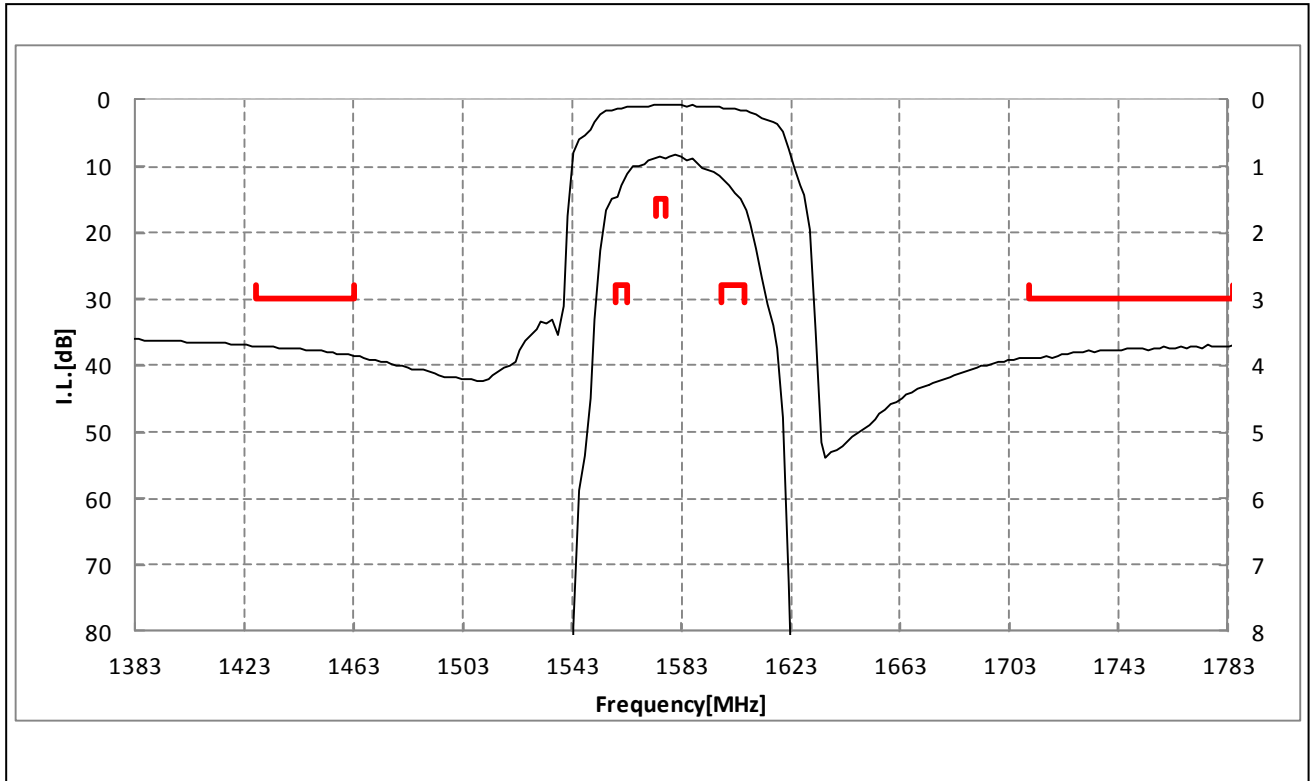
Item	Characteristics (-40 to +105 deg.C)			Unit	Note
	min.	typ.*	max.		
	Center Frequency		1582.5		
Insertion Loss	1559.05 to 1563.15 MHz	1.5	2.8		
	1559.05 to 1563.15 MHz	1.5	2.4		-20 to +85deg.C
	1573.42 to 1577.42 MHz	0.95	1.5		
	1573.42 to 1577.42 MHz	0.95	1.4		-20 to +85deg.C
	1597.55 to 1605.89 MHz	1.55	2.8		
Ripple Deviation	1597.55 to 1605.89 MHz	1.55	2.4		-20 to +85deg.C
	1559.05 to 1563.15 MHz	0.3	2.0		
	1559.05 to 1563.15 MHz	0.3	1.6		-20 to +85deg.C
	1573.42 to 1577.42 MHz	0.1	1.0		
	1573.42 to 1577.42 MHz	0.1	0.9		-20 to +85deg.C
VSWR	1597.55 to 1605.89 MHz	0.4	2.0		
	1597.55 to 1605.89 MHz	0.4	1.6		-20 to +85deg.C
	1559.05 to 1563.15 MHz	1.15	2.5		
	1559.05 to 1563.15 MHz	1.15	2.2		-20 to +85deg.C
	1573.42 to 1577.42 MHz	1.15	2.0		
GDT Ripple Deviation	1573.42 to 1577.42 MHz	1.15	2.0		-20 to +85deg.C
	1597.55 to 1605.89 MHz	1.4	2.5		
	1597.55 to 1605.89 MHz	1.4	2.2		-20 to +85deg.C
	1597.55 to 1605.89 MHz	4.8	20		
	1597.55 to 1605.89 MHz	4.8	20		
Absolute Attenuation	777. to 798. MHz	30	38		
	824. to 915. MHz	30	37		
	10. to 925. MHz	30	36		
	925. to 960. MHz	30	36		
	1427. to 1463. MHz	30	37		
	1710. to 1785. MHz	30	37		
	1850. to 1980. MHz	30	36		
	2400. to 2570. MHz	30	37		
	2570. to 3000. MHz	30	37		

* Typical value at 25±2deg.C

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Electrical Characteristic

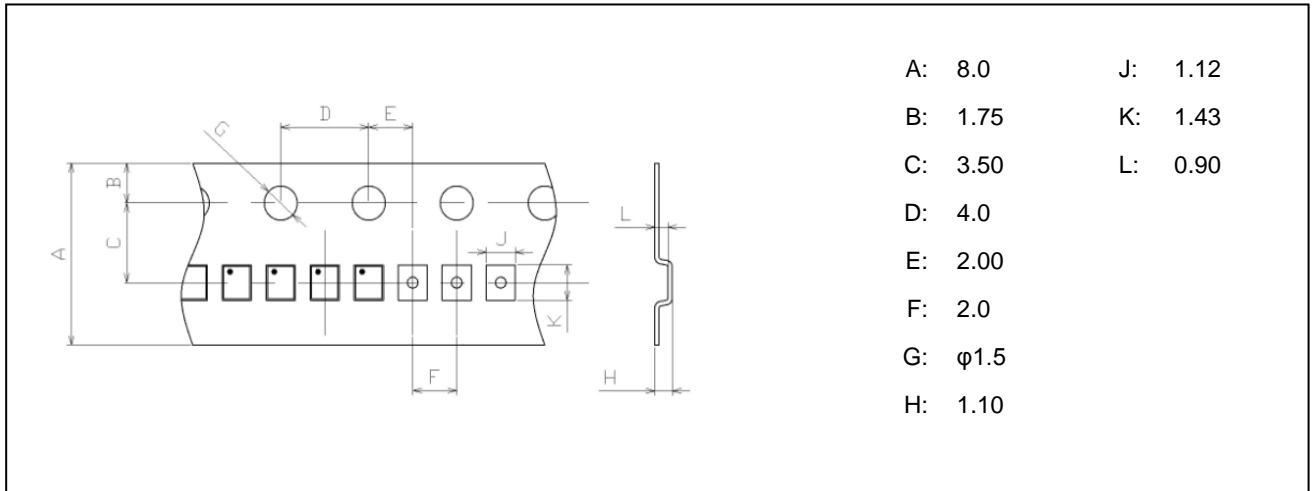
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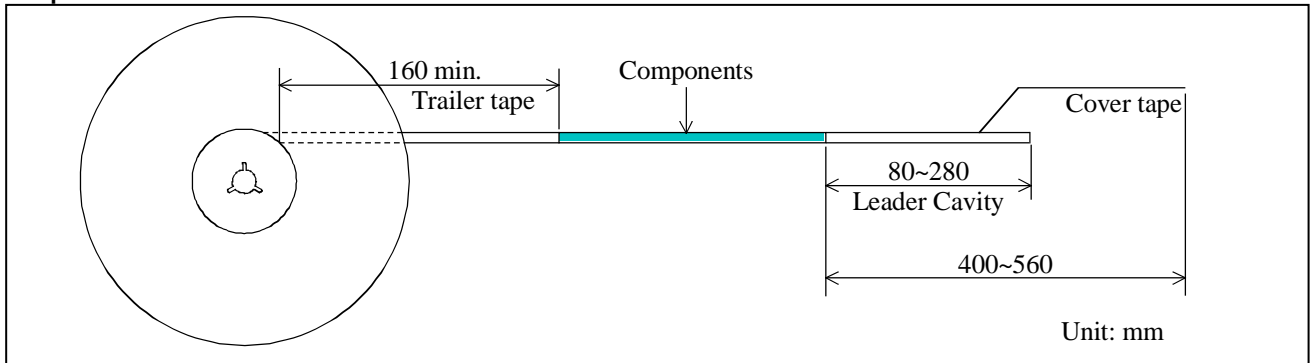
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Dimensions of Tape & Reel unit: mm

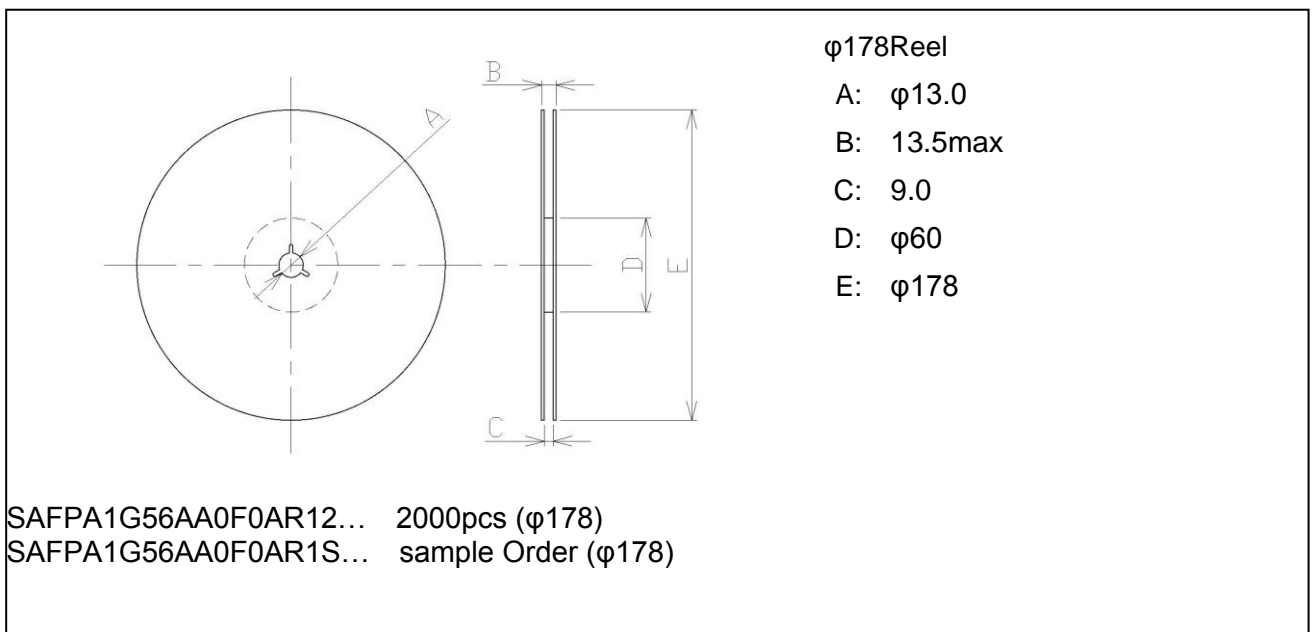
Carrier Tape



Tape



Reel



Marking Code

Table A: Month Code

2013	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2017	A	B	C	D	E	F	G	H	J	K	L	M
2021												
2014	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2022												
2015	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2019	a	b	c̄	d	e	f	g	h	j	k	l	m
2023												
2016	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2020	n	p	q	r	s	t	u	v	w	x	y	z
2024												

Table B: Date Code

date	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	
code	A	B	C	D	E	F	G	H	J	K	
date	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th	
code	L	M	N	P	Q	R	S	T	U	V	
date	21st	22nd	23rd	24th	25th	26th	27th	28th	29th	30th	31st
code	W	X	Y	Z	a	b	c̄	d	e	f	g

Important Notice (1/2)

 PLEASE READ THIS NOTICE BEFORE USING OUR PRODUCTS.

Please make sure that your product has been evaluated and confirmed from the aspect of the fitness for the specifications of our product when our product is mounted to your product.

All the items and parameters in this product specification/datasheet/catalog have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment specified in this specification. You are requested not to use our product deviating from the condition and the environment specified in this specification.

Please note that the only warranty that we provide regarding the products is its conformance to the specifications provided herein and WE HEREBY DISCLAIM ALL OTHER WARRANTIES REGARDING THE PRODUCTS, EXPRESS OR IMPLIED, INCLUDING THAT THEY ARE DEFECT-FREE. Accordingly, we shall not be responsible for any defects in products or equipment incorporating such products, which are caused under the conditions other than those specified in this specification.

WHEN USING OUR PRODUCT UNDER OTHER CONDITIONS THAN DESCRIBED IN OUR SPECIFICATION OR OTHER APPLICATION THAN AGREED APPLICATION IN WRITING, WE HEREBY DISCLAIM ALL WARRANTIES REGARDING THE PRODUCTS.

The product shall not be used in any application listed below which requires especially high reliability for the prevention of such defect as may directly cause damage to the third party's life, body or property. You acknowledge and agree that, if you use our products in such applications, we will not be responsible for any failure to meet such requirements.

Important Notice (2/2)

Furthermore, YOU AGREE TO INDEMNIFY AND DEFEND US AND OUR AFFILIATES AGAINST ALL CLAIMS, DAMAGES, COSTS, AND EXPENSES THAT MAY BE INCURRED, INCLUDING WITHOUT LIMITATION, ATTORNEY FEES AND COSTS, DUE TO THE USE OF OUR PRODUCTS IN SUCH APPLICATIONS.

- Aircraft equipment.
- Aerospace equipment
- Undersea equipment.
- Power plant control equipment
- Medical equipment.
- Transportation equipment (vehicles, trains, ships, elevator, etc.).
- Traffic signal equipment.
- Disaster prevention / crime prevention equipment.
- Burning / explosion control equipment
- Application of similar complexity and/ or reliability requirements to the applications listed in the above.

We expressly prohibit you from analyzing, breaking, Reverse-Engineering, remodeling altering, and reproducing our product. Our product cannot be used for the product which is prohibited from being manufactured, used, and sold by the regulations and laws in the world.

This product is ESD (ElectroStatic Discharge) sensitive device. When you install or measure this, you should be careful not to add antistatic electricity or high voltage. Please be advised that you had better check anti surge voltage.

Please do not use our products, our technical information and other data provided by us for the purpose of developing of mass-destruction weapons and the purpose of military use. Moreover, you must comply with "foreign exchange and foreign trade law", the "U.S. export administration regulations", etc.

Please note that Murata may discontinue the manufacturing of this product. Our intention is to announce PCN/PTN minimum 6 months in advance and give customers a chance for a last time buy. In any case when Murata is forced to shorten the PCN/PTN period due to external reason such as PCN/PTN of materials and/or components from our external suppliers, we will contact our customers immediately and look for a mutual solution.

Murata will conduct a failure analysis including an 8D report for defect or alleged defect of Products at the level required for consumer-grade communication market Products. Such analysis may not always be in accordance with your expectation (for example, in cases when the defect was caused by an external supplier of Murata by delivering defective materials/components into our Products).

The product shall not be used in any other application/model than that of claimed to Murata.

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In particular we disclaim liability for damages caused by

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- deviation or lapse in function of engineering sample,
- improper use of engineering samples.

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