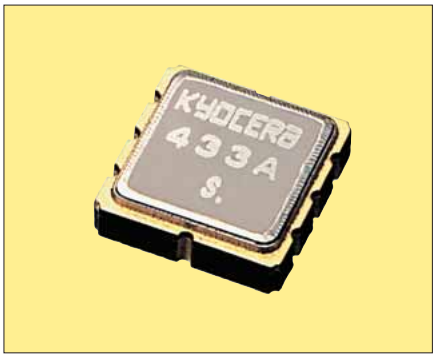


Pb Free

RoHS Conforming

Features

- Small and low profile
- Flat pass band characteristics
- Low insertion loss
- Excellent temperature stability

Application

- Remote Keyless Entry

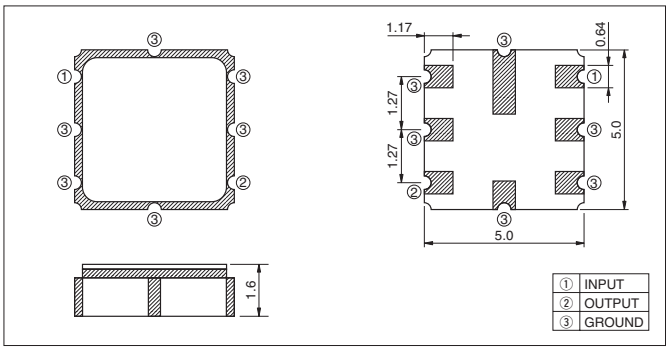
How to Order

PAFC 433.92 AR 00
① ② ③ ④

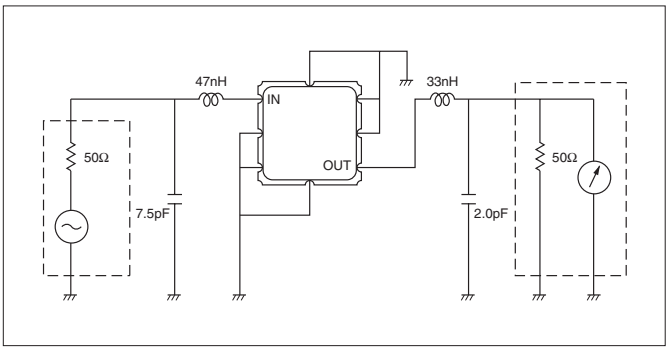
①Series
②Center Frequency
③Type
④Option

Dimensions

(Unit : mm)



Test Circuit

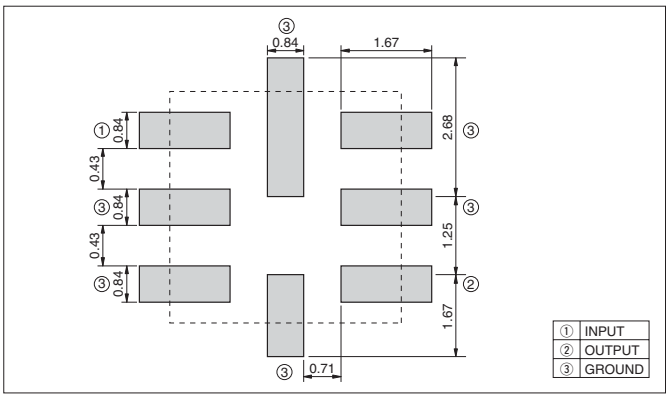


Specifications

Parts No.	Nominal Center Frequency (fn)	Insertion Loss	Pass Band Width (at 3dB)	Stop Band Attenuation						Operating Temperature	Storage Temperature
				10MHz - 414MHz	414MHz - 428MHz	428MHz - 432.92MHz	434.92MHz - 442MHz	442MHz - 550MHz	550MHz - 1000MHz		
PAFC433.92AR00	433.920 MHz	4.0dB max.	Fn±200kHz min.	42dB min.	35dB min.	15dB min.	10dB min.	35dB min.	40dB min.	–40 to 85°C	–40 to 85°C

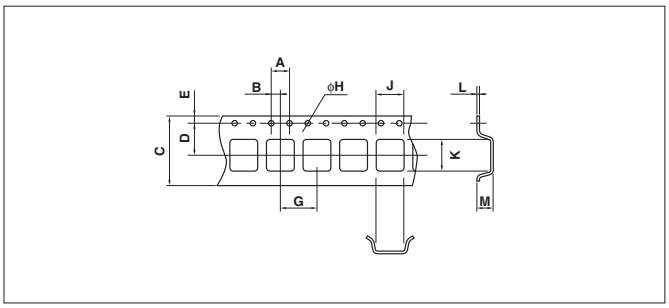
Recommended Land Pattern

(Unit : mm)



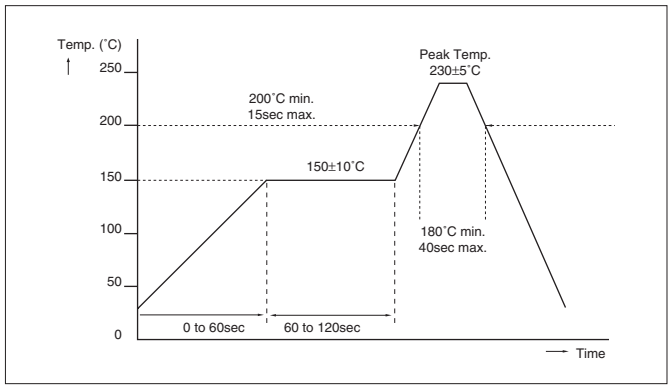
Taping Dimensions

(Unit : mm)



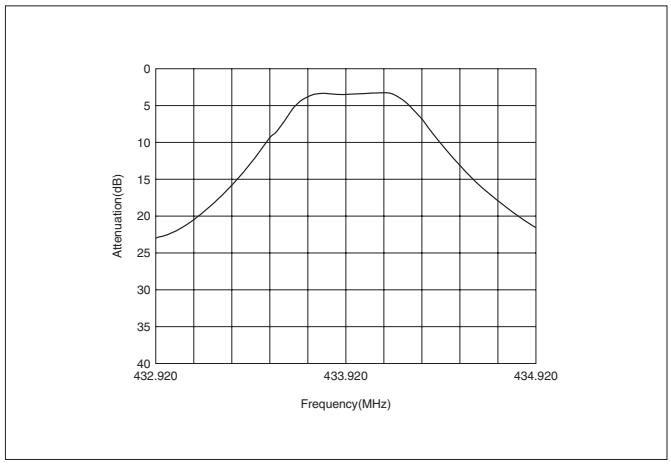
Code	A	B	C	D	G	H	J	K	L	M
Dimensions	4.0	2.0	12.0	5.5	8.0	1.55	5.3	5.3	0.3	2.10

Recommended Temperature IR Reflow

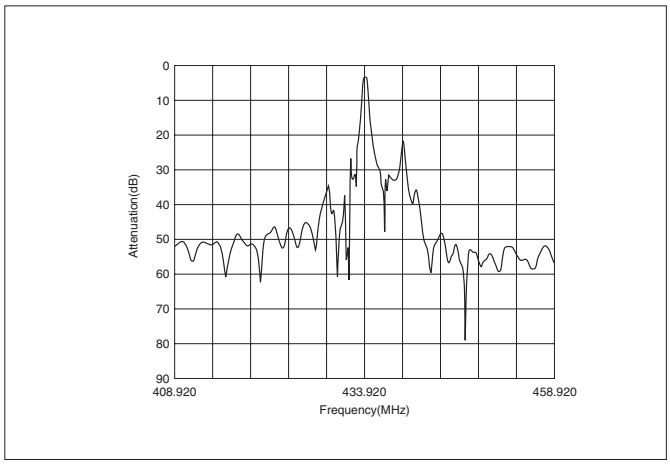


Characteristics

• Pass Band Characteristics



• Spurious Characteristics



Pb Free RoHS Conforming

Features

- Small and low profile
- Ceramic package type
- Flat pass band characteristics
- Low insertion loss
- Circuit simplification

How to Order

PAFC 243 B
① ② ③

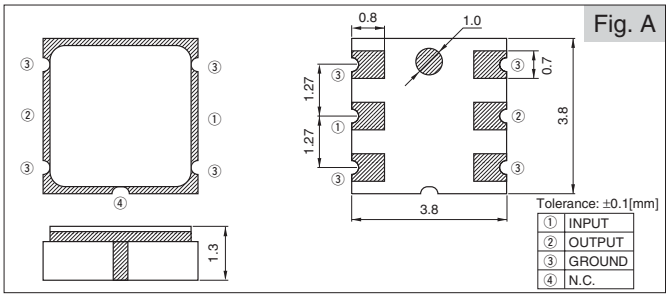
①Series
②Center Frequency
③Type

Application

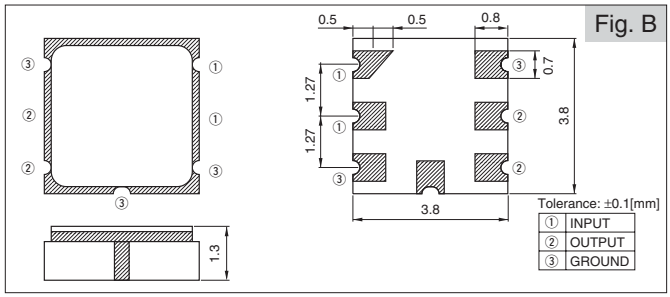
- PHS

Dimensions

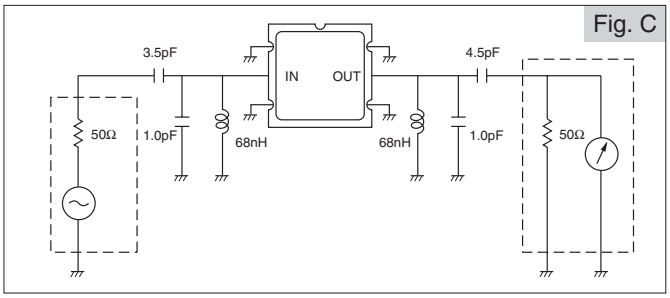
(Unit : mm)

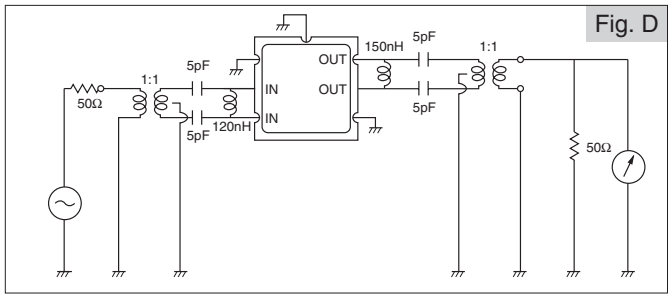


(Unit : mm)



Test Circuit





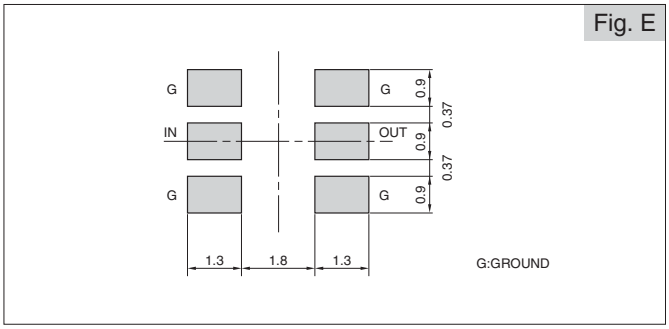
Specifications

Parts No.	Nominal Center Frequency (fn)	Insertion Loss	Pass Band Width (at 3dB)	Stop Band Attenuation			Ripple (fn±110kHz)	Group Delay Time (fn±110kHz)	Operating Temperature	Storage Temperature	Dimensions	Test Circuit	Recommended Land Pattern	Taping Dimensions
				fn±600kHz	fn±1.2MHz	fn±fa MHz(*)								
PAFC243B	243.95MHz	4.0dB max	±130kHz min	30dB min	40dB min	60dB min	1.5dB max	1.2μs max	−10 to 60°C	−20 to 80°C	Fig. A	Fig. C	Fig. E	Fig. G
PAFC248C	248.45MHz	4.5dB max	±130kHz min	30dB min	35dB min	60dB min	1.5dB max	1.2μs max			Fig. B	Fig. D	Fig. F	Fig. G

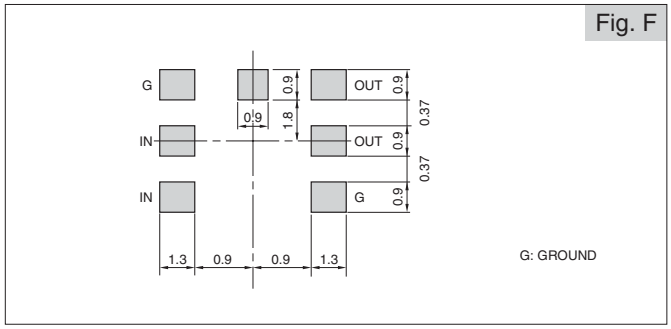
* Note PAFC248C : fa=21.5MHz
PAFC243B : fa=21.6MHz

Recommended Land Pattern

(Unit : mm)



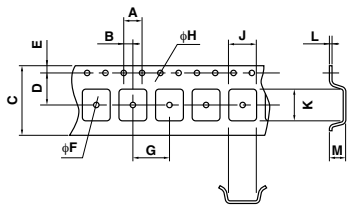
(Unit : mm)



Taping Dimensions

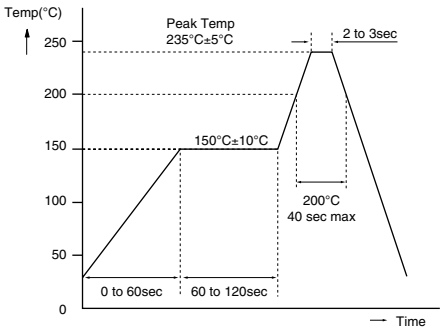
(Unit : mm)

Fig. G



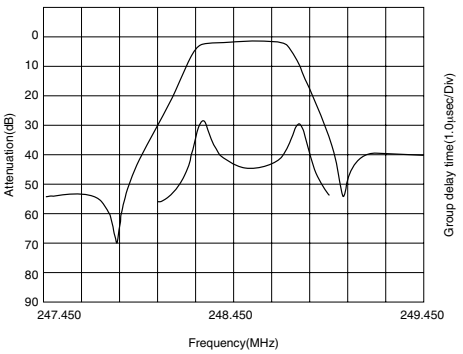
Code	A	B	C	D	E	F	G	H	J	K	L	M
Dimen-sion	4.0	2.0	12.0	5.5	1.75	1.55	8.0	1.55	4.3	4.3	0.3	2.05

Recommended Temperature Profile IR Reflow

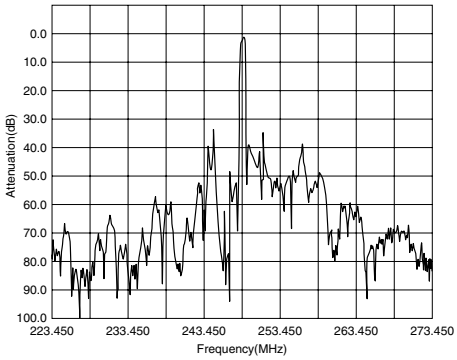


Characteristics

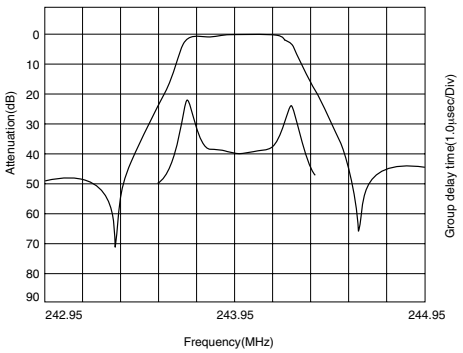
PAFC248C(Pass Band Characteristics)



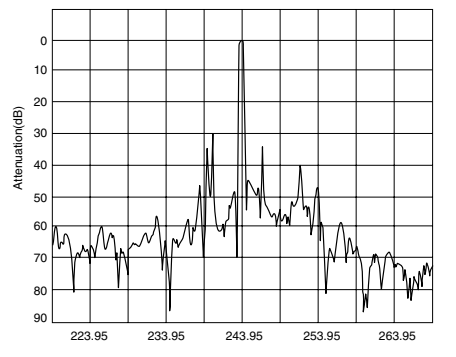
PAFC248C(Spurious Characteristics)



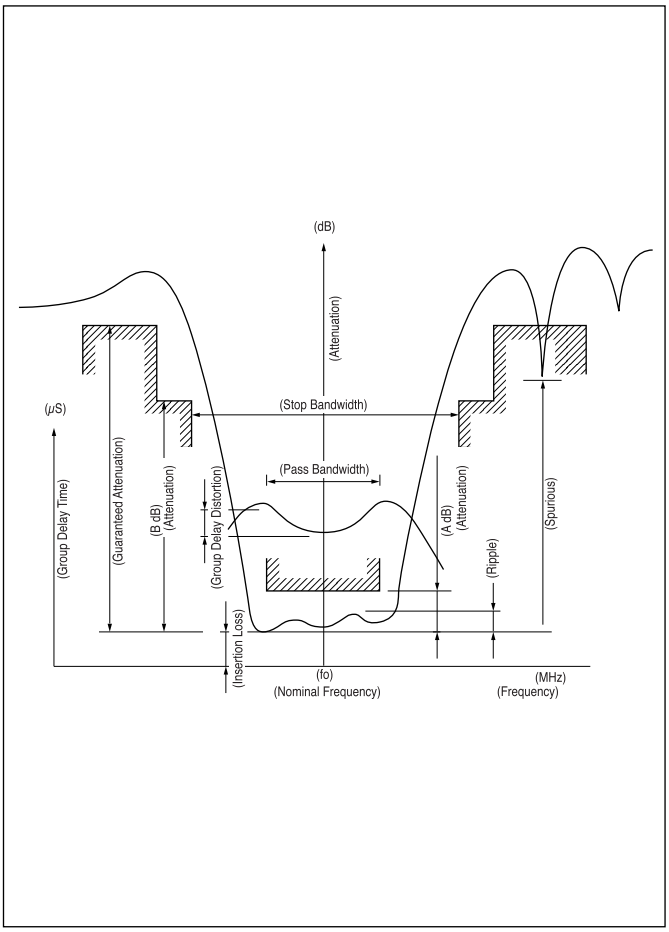
PAFC243B(Pass Band Characteristics)



PAFC243B(Spurious Characteristics)



Characteristic diagram and terms of crystal filters



■Nominal Frequency
This is the nominal value of the center frequency (fo) and is used as the reference frequency of related standards.

■Pass Bandwidth
This is the frequency interval in which the relative attenuation (the attenuation from the minimum insertion loss) is equal to the specified value “A dB” (Usually 3dB).

■Insertion Loss
This is the difference of attenuation when a filter is and isn’t inserted. The minimum insertion loss is the minimum value of insertion loss and becomes as the reference level of attenuation characteristics specification. The constant loss is the insertion loss at the nominal frequency.

■Ripple
This is the maxinum value of the difference between the peak value of attenuation in the pass band and the minimum insertion loss.

■Stop Bandwidth
This is the frequency interval in which the relative attenuation is equal to the specified value “B dB”.

■Guaranteed Attenuation
This is the relative attenuation guaranteed in the specified range within attenuation band scope.

■Spurious Response
This is the value of relative attenuation generated by the secondary vibration in the specified range within attenuation band scope.

■Group Delay Time
This is the difference between the maximum and the minimum value of the group delay in the specified range of the pass band.

■Terminating Impedance
This is the impedance value terminated to the input and the output side of filter and is indicated by the resistance portion and the parallel capacity portion including the floating capacity.

ORDERING FORMAT for CRYSTAL FILTERS

Please specify the following items when ordering crystal filters.

I. **Standard product in catalog Indicate type name.**
for example : MXF10.7-6A

II. **Indicate following items in specification if you order special type.**

1. Electrical Characteristics

(1)Nominal Frequency _____MHz
(2)Pass Bandwidth at_____dB ±_____kHz MIN.
(3)Stop Bandwitdth at_____dB ±_____kHz MAX.
(4)Guaranteed Attenuation _____dB MINn. (fo ±_____kHz)
(5)Spurious Response _____dB MIN.
(6)Ripple _____dB MAX.
(7)Insertion Loss _____dB MAX.
(8)Terminating Impedance _____Ω//_____pF

2. Environmental Condition
(1)Operating Temperature Range _____˚C ~_____˚C

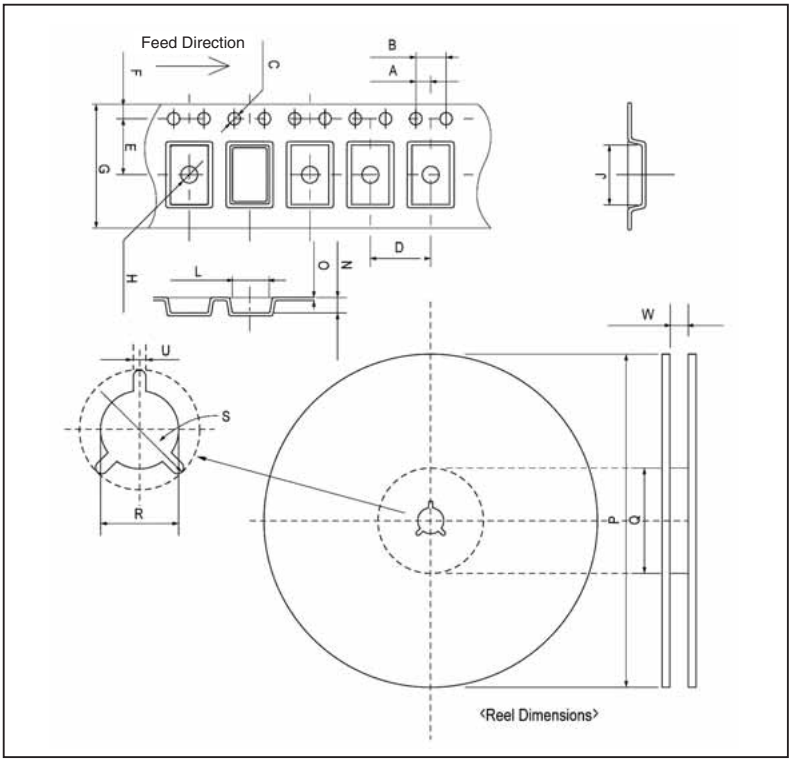
3. Dimensions _____

4. Application _____

Tape & Reel Specifications

■SAW FILTERS / MCFs

		SAW FILTERS		
		SF16	SF25	SF30
TAPE	A	2.0±0.05	2.0±0.05	2.0±0.05
	B	4.0±0.1	4.0±0.1	4.0±0.1
	C	ϕ1.5±0.1	ϕ1.55+0.1/−0	ϕ1.55+0.1/−0
	D	4.0±0.1	4.0±0.1	8.0±0.1
	E	3.5±0.05	5.5±0.05	5.5±0.05
	F	1.75±0.1	1.75±0.1	1.75±0.1
	G	8.0±0.2	12.0±0.2	12.0±0.2
	H	ϕ1.1±0.1	ϕ1.1±0.1	ϕ1.55±0.1
	J	1.9±0.1	2.9±0.1	3.3±0.1
	L	1.85±0.1	2.4±0.1	3.3±0.1
	N	0.95±0.1	1.2±0.1	1.85±0.1
	O	0.25±0.05	0.3±0.05	0.3±0.05
REEL	P	ϕ178±2	ϕ330±2	ϕ330±2
	Q	ϕ80±2	ϕ100±2	ϕ100±2
	R	ϕ13±0.2	ϕ13±0.2	ϕ13±0.2
	S	ϕ21±0.8	ϕ21±0.8	ϕ21±0.8
	U	2±0.5	2±0.5	2±0.5
	W	13.5±1	13.5±1	13.5±1
Qty		3000	3000	3000



		SAW FILTERS								MCF
		PAFA	PAFC243B	PAFC433.92A	B54	B22 B43	B19 B25	C12 C30	B44	FP2 FP4
TAPE	A	2.0±0.05	2.0±0.05	2.0±0.05	2.0±0.10	2.0±0.10	2.0±0.05	2.0±0.10	2.0±0.10	2.0±0.1
	B	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1	4.0±0.1
	C	ϕ1.55+0.05	ϕ1.5+0.1/−0	ϕ1.5+0.1/−0	ϕ1.55±0.05	ϕ1.55±0.05	ϕ1.55±0.05	ϕ1.55±0.05	ϕ1.55±0.05	ϕ1.55±0.05
	D	8.0±0.1	8.0±0.1	8.0±0.1	8.0±0.1	8.0±0.1	8.0±0.1	8.0±0.1	8.0±0.1	8.0±0.1
	E	5.5±0.05	5.5±0.05	5.5±0.05	5.5±0.1	7.5±0.1	5.5±0.05	7.5±0.1	5.5±0.05	7.5±0.1
	F	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1
	G	12.0±0.2	12.0±0.2	12.0±0.3	12.0±0.3	16.0±0.3	12.0±0.15	16.0±0.3	12.0±0.2	16.0±0.3
	H	ϕ1.55±0.05	ϕ1.55±0.1	ϕ1.55±0.1	ϕ1.5+0.05/−0	ϕ1.55±0.05	ϕ1.55±0.05	ϕ1.55±0.05	ϕ1.55±0.05	ϕ1.55±0.05
	J	3.3±0.1	4.3±0.1	5.3±0.1	5.25±0.1	9.4±0.1	4.2±0.1	7.6±0.1	3.95±0.2	7.5±0.1
	L	3.3±0.1	4.3±0.1	5.3±0.1	3.45±0.1	5.1±0.1	4.2±0.1	5.6±0.1	3.95±0.2	5.5±0.1
	N	1.85±0.1	2.05±0.1	2.1±0.1	1.5+0.1/−0	2.0±0.1	1.8±0.1	1.94±0.1	1.35±0.1	1.8±0.1
	O	0.3±0.05	0.3±0.05	0.3±0.05	0.3±0.1	0.3±0.05	0.3±0.05	0.3±0.05	0.2±0.05	0.3±0.05
REEL	P	ϕ255±2	ϕ255±2	ϕ255±2	ϕ330±1	ϕ330±1	ϕ178±2	ϕ330±1	ϕ178±2	ϕ178±2
	Q	ϕ100±2	ϕ80±2	ϕ80±2	ϕ100±1	ϕ100±1	ϕ80±1	ϕ100±1	ϕ80±1	ϕ80±2
	R	ϕ13±0.2	ϕ13±0.2	ϕ13±0.2	ϕ13±0.3	ϕ13±0.3	ϕ13±0.5	ϕ13±0.3	ϕ13±0.5	ϕ13±0.5
	S	ϕ21±0.8	ϕ21±0.8	ϕ21±0.8	ϕ21±0.5	ϕ21±0.5	ϕ21±0.5	ϕ21±0.5	ϕ21±0.5	ϕ21±0.8
	U	2±0.5	2±0.5	2±0.5	2±0.5	2±0.5	2±0.5	2±0.5	2±0.5	2±0.5
	W	13.5±1	13.5±1	13.5±1	12.4+2/-0	16.4±0.5	13.5+2/−0	16.4±0.5	13.5+2/−0	17.5+1/−0.5
Qty		2000	2000	2000	3000	3000	1000	3000	1000	1000