

MQ

7.0 * 5.0 * 1.3 mm

Surface Mount

4 poles in one package

Fund.

21.4
MHz

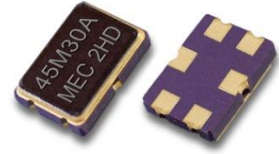
21.7
MHz

45.0
MHz

2 poles
4 poles

Features

- Specifically designed for mobile, wireless communications pagers, cellular and cordless phones.

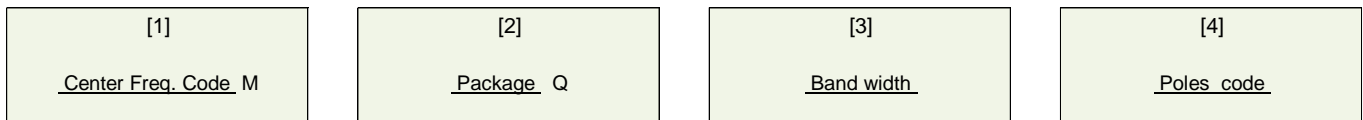


Surface Mount Type [Q series (21.400 , 21.700 , 45.000 MHz)]

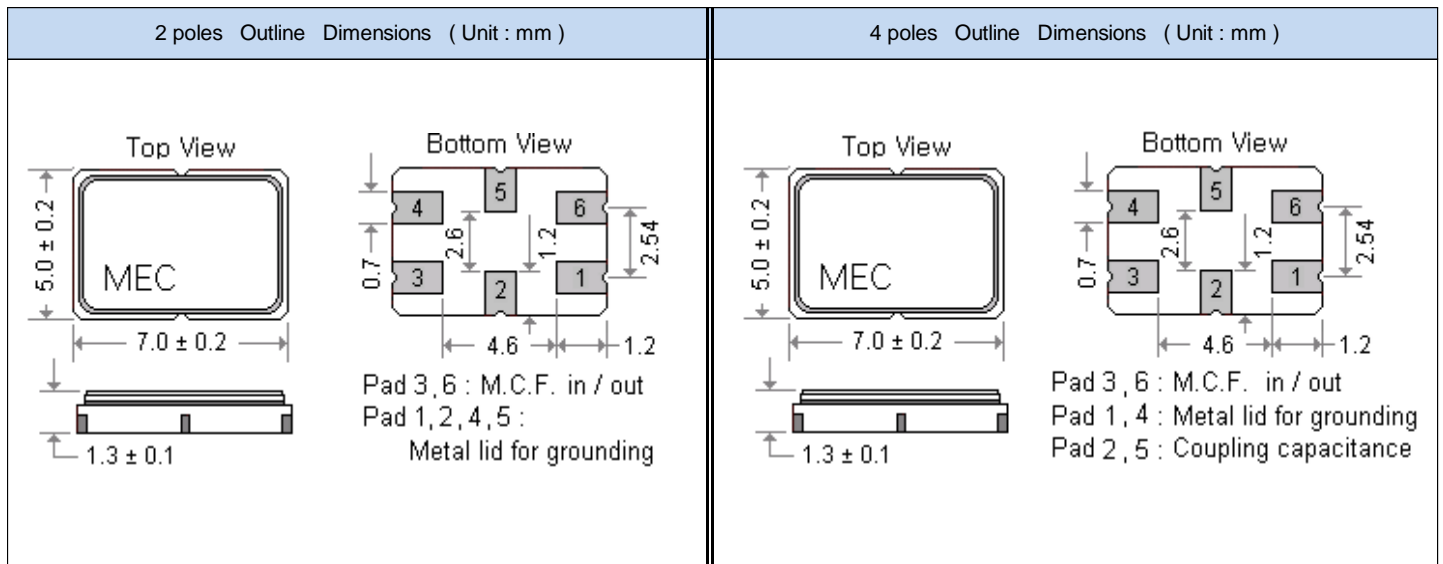
Frequency (MHz)	Model	No. of poles	Pass Bandwidth		Stop Bandwidth		Ripple	Insertion Loss	Guaranteed Attenuation		Terminating Impedance	
			dB	KHz (min.)	dB	KHz (max.)	dB (max.)	dB (max.)	dB	KHz	ohms // pF	Cc (pF)
21.400	21MQ7.5A	2	3	± 3.75	20	± 18	1.0	2.0	70	-910	850 // 6.0	
	21MQ15A	2	3	± 7.5	18	± 25	0.5	1.5	70	-910	1500 // 2.5	
	21MQ15B	4	3	± 7.5	40	± 25	1.0	3.0	70	-910	1800 // 0.35	5.0
	21MQ30A	2	3	± 15	15	± 50	1.5	2.0	60	-910	2500 // 0	
21.700	21.7MQ15A	2	3	± 7.5	18	± 28	1.0	2.0	70	-910	1500 // 2.5	
45.000	45MQ7.5A	2	3	± 3.75	15	± 18	1.0	2.0	70	-910	350 // 6.0	
	45MQ7.5B	4	3	± 3.75	40	± 15	1.0	4.0	80	-910	300 // 5.0	16.0
	45MQ15A	2	3	± 7.5	15	± 25	1.0	2.0	70	-910	560 // 6.0	
	45MQ15B	4	3	± 7.5	30	± 25	1.0	3.0	80	-910	800 // 1.7	8.0

(Operating Temperature Range : -20°C to +70°C ; Storage Temperature Range : -40°C to +85°C)

Part Number Format and Example



[1]	Freq. code : " 21 " for 21.400MHz , " 21.7 " for 21.700MHz , " 45 " for 45.000MHz ,	[2]	" Q " series for (7.0 * 5.0 * 1.3mm) package
[3]	Pass band width (3dB) (min.) * 2 [" 7.5 " for ± 3.75 KHz , " 15 " for ± 7.5 KHz , " 30 " for ± 15 KHz]		
[4]	No. of poles [" A " for 2 poles] [" B " for 4 poles]		



M. C. F. [Monolithic Crystal Filters]

Part Number Format and Example

SMD Type Part Number Format			
[1]	[2]	[3]	[4]
Frequency Code	MQ	Width Code	Poles Code

Dip Type Part Number Format				
[1]	[2]	[3]	[4]	[5]
Frequency Code	M	Width Code	Poles Code	Holder Type

Examples 45 MQ 30 A

Examples 21.7 M 7.5 D U5SM

[1]	Freq. code : " 10 " for 10.700MHz , " 21 " for 21.400MHz , " 21.7 " for 21.700MHz , " 45 " for 45.000MHz , Freq. code : If none standard freq. please show frequency with one decimal point .
[2]	" M " Dip Type series , " MQ " SMD Type (7.0 * 5.0 * 1.3 mm)
[3]	Pass band width (3dB) (min.) " 7.5 " for ± 3.75 KHz , " 15 " for ± 7.5 KHz , " 20 " for ± 10 KHz , " 30 " for ± 15 KHz ,
[4]	No. of poles " A " for 2 poles , " B " for 4 poles , " C " for 6 poles , " D " for 8 poles
[5]	Dip type holder type
[6]	Standard operating temperature range is -20°C to 70°C , If non-standard please enter the desired temp. range after " / " , for example " / -30+70 " : -30°C to 70°C

Package Dimensions (unit : mm)

[U 1]	[U 5]									
[U 1 M J]	[U 5 M J]									
4 pole M.C.F. (paired packages)	[S - 1] , [S - 2]									
	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>L</th> <th>P</th> </tr> </thead> <tbody> <tr> <td>S-1</td> <td>11.0</td> <td>7.4</td> </tr> <tr> <td>S-2</td> <td>13.4</td> <td>9.8</td> </tr> </tbody> </table>		L	P	S-1	11.0	7.4	S-2	13.4	9.8
	L	P								
S-1	11.0	7.4								
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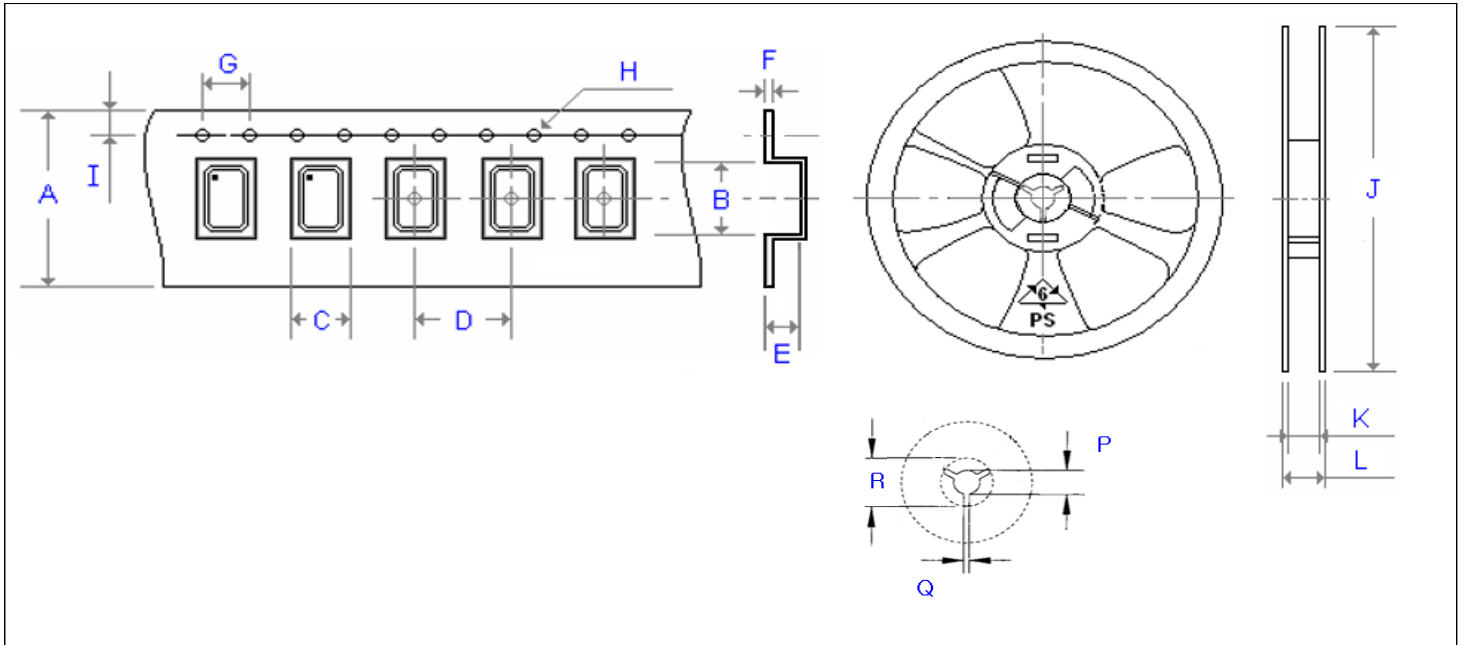
Mercury www.mercury-crystal.com ■ Taiwan : Tel: (+886)-2-2406-2779 / sales-tw@mercury-crystal.com

■ USA : Tel: (+1)-909-466-0427 / sales-us@mercury-crystal.com ■ China : Tel: (+86)-512-5763-8100 / sales-cn@mercury-crystal.com

Emboss Taping and Reel Specifications

[Crystal Units]

[M . C . F . Units]



Carrier Type Dimensions (unit : mm) ±0.3mm

	A	B	C	D	E	F	G	H	I	pcs / reel
X11	8.00	1.79	1.39	4.00	0.45	0.25	4.00	∅ 1.50	1.75	3000
X21	8.00	2.30	1.90	4.00	0.60	0.20	4.00	∅ 1.50	1.75	3000
X22	8.00	2.80	2.25	4.00	1.10	0.30	4.00	∅ 1.50	1.75	3000
X32	8.00	3.40	2.70	4.00	1.40	0.25	4.00	∅ 1.50	1.75	3000
X42	12.00	4.30	2.80	8.00	1.00	0.30	4.00	∅ 1.50	1.75	1000
X2012	8.00	2.25	1.45	4.00	0.75	0.25	4.00	∅ 1.50	1.75	3000
X3215	12.00	3.40	1.75	4.00	0.87	0.32	4.00	∅ 1.50	1.75	3000
MJ	12.00	5.30	3.60	8.00	1.40	0.30	4.00	∅ 1.50	1.75	1000
MF	16.00	6.30	4.00	8.00	1.40	0.30	4.00	∅ 1.50	1.75	1000
MQ	16.00	7.20	5.40	8.00	1.80	0.30	4.00	∅ 1.50	1.75	1000
M49	24.00	15.00	5.00	12.00	4.25	0.40	4.00	∅ 1.50	1.75	1000
ML49	24.00	14.80	5.00	12.00	3.50	0.40	4.00	∅ 1.50	1.75	1000
MP4 (24)	24.00	13.30	5.10	12.00	4.20	0.40	4.00	∅ 1.50	1.75	1000
MP5 (25)	24.00	13.40	5.10	12.00	5.20	0.40	4.00	∅ 1.50	1.75	1000

Reel Dimensions (unit : mm) ±2mm

	J	K	L	P	Q	R	pcs / reel
X11	180.0	8.4	11.4	13.0	2.5	20.2	3000
X21	180.0	8.4	11.4	13.0	2.5	20.2	3000
X22	180.0	8.4	11.4	13.0	2.5	20.2	3000
X32	180.0	9.0	12.0	13.0	2.5	20.2	3000
X42	180.0	13.0	16.0	13.0	2.5	20.2	1000
X2012	180.0	9.0	11.4	13.0	2.5	20.2	3000
X3215	180.0	13.0	15.4	13.0	2.5	20.2	3000
MJ	180.0	13.0	16.0	13.0	2.5	20.2	1000
MF	180.0	17.2	19.3	13.0	2.5	20.2	1000
MQ	180.0	17.2	19.3	13.0	2.5	20.2	1000
M49	330.0	24.5	29.1	13.0	2.5	20.2	1000
ML49	330.0	24.5	29.1	13.0	2.5	20.2	1000
MP4 (24)	330.0	24.5	29.1	13.0	2.5	20.2	1000
MP5 (25)	330.0	24.5	29.1	13.0	2.5	20.2	1000

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