

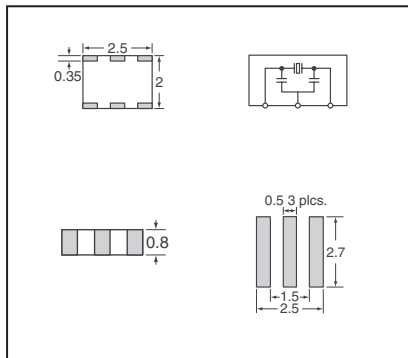
**Features:** • The FCR series provide a high degree of stability between the quartz oscillator and the LC or RC oscillating circuits. Temperature characteristics: -20°C - 85°C  
**Specifications:** • Frequency Tolerance: ±0.5% • Operating Temperature: -40°C - 85°C

Fig.	Frequency (MHz)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape & Reel Pricing 1,500	TDK Part No.
			1	10	100			
<b>FCR Series</b>								
1	16.00	445-1646-ND*	.39	3.24	25.13	—	—	FCR16.0M2G
2	4.00	445-1642-ND*	.30	2.51	19.50	—	—	FCR4.0M5
	4.19	445-1643-ND*	.30	2.51	19.50	—	—	FCR4.19M5
	6.00	445-1644-ND*	.30	2.51	19.50	—	—	FCR6.0M5
	8.00	445-1645-ND*	.31	2.56	19.87	—	—	FCR8.0M5
3	4.00	445-1638-ND*	.31	2.56	19.87	—	—	FCR4.0M5
	4.19	445-1639-ND*	.31	2.56	19.87	—	—	FCR4.19M5
	6.00	445-1640-ND*	.31	2.56	19.87	—	—	FCR6.0M5
	8.00	445-1641-ND*	.33	2.71	21.00	—	—	FCR8.0M5
4	16.00	445-2568-1-ND	.34	3.08	25.63	445-2568-2-ND	171.00/M	FCR16.0M6T
	18.00	445-2569-1-ND	.34	3.08	25.63	445-2569-2-ND	171.00/M	FCR18.0M6T
	18.43	445-2570-1-ND	.34	3.08	25.63	—	—	FCR18.43M6T
	24.00	445-2571-1-ND	.34	3.08	25.63	445-2571-3-ND†	171.00/M	FCR24.0M6T
	25.00	445-2572-1-ND	.34	3.08	25.63	—	—	FCR25.0M6T

\* Bulk Packaging † Tape and Box Packaging

**D**

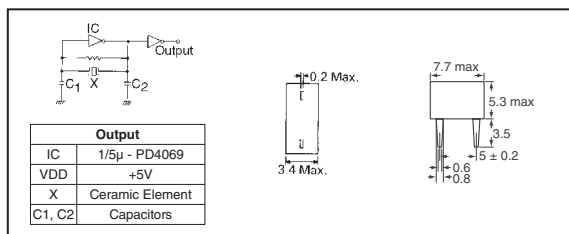
**Ceramic Resonators - Surface Mount**



**Features:**  
 • The CCR Series are thin type ceramic chip resonators. 3rd overtone thickness mode elements are used for the 16.93 - 50MHz band.  
 • Built-in load capacitance  
**Specifications:**  
 • Frequency Tolerance: ±0.5% • Operating Temperature: -40°C - 85°C

Frequency (MHz)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape & Reel Pricing 2,000	TDK Part No.
		1	10	100			
<b>CCR Series</b>							
16.93	445-1648-1-ND	.63	.55	.43	445-1648-2-ND	294.58/M	CCR16.93MXC7T
20.00	445-1649-1-ND	.63	.55	.43	445-1649-2-ND	294.58/M	CCR20.0MXC7T
25.00	445-1650-1-ND	.63	.55	.43	445-1650-2-ND	294.58/M	CCR25.0MXC7T
30.00	445-1651-1-ND	.60	.52	.40	445-1651-2-ND	280.00/M	CCR30.0MXC7T
33.86	445-1652-1-ND	.60	.52	.40	445-1652-2-ND	280.00/M	CCR33.86MXC7T
48.00	445-1654-1-ND	1.09	.95	.73	445-1654-2-ND	507.50/M	CCR48.0MXC7A15T

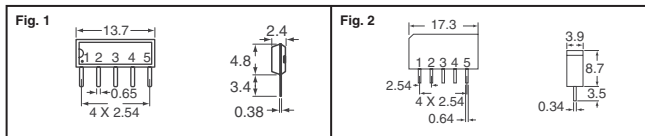
**TOKO Ceramic Resonators - Surface Mount**



**Features:**  
 TOKO ceramic resonators utilize the piezoelectric principle converting a mechanical force (stress) into an electrical signal or converting an electrical signal into a mechanical force.  
 The ceramic resonator is a thin section of piezoelectric ceramic material, such as quartz, whose sides are metallized into a corresponding pair of electrodes and upon the application of current produce a lengthwise vibration.

Oscillating Frequency	External Components	Digi-Key Part No.	Price Each			Toko Part No.
			1	10	100	
<b>CRK Type</b>						
400kHz ±1%	C1-560pF, C2-200pF	TK9940-ND	1.88	1.52	.94	BP11DCRK400

**EPCOS SAW Bandpass Filters**



Pin Configuration	
1	Input
2	Input - Ground
3	Chip Carrier - Ground
4	Output
5	Output

Fig.	Frequency (MHz)	Insertion Loss (dB)	Bandwidth (MHz)	Digi-Key Part No.	Price Each				Epcos Part No.		
					1	25	50	100			
1	43.75	14.8	6	495-1952-5-ND	9.56	8.29	7.65	6.37	B39438X6964M100		
				495-1953-5-ND	3.19	2.77	2.55	2.13	B39438X6964N201		
2	44	14.7	6	495-1691-5-ND	9.56	8.29	7.65	6.37	B39440X6965N201		
				16.2	8	495-1954-5-ND	16.88	14.63	13.50	11.25	B39440X6855M100
						495-1690-5-ND	8.04	6.98	6.44	5.37	B39440X6941N201

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

**More Product Available Online: [www.digkey.com](http://www.digkey.com)**



# SAW Filters - Surface Mount

Applications: The front-end SAW filter in the receiver eliminates interference from the incoming RF signal, thus increasing selectivity and sensitivity in short-range devices. Tighter tolerances are available upon request.



Fig.	Frequency (MHz)	Passband (MHz)	Insertion Loss (dB)	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape & Reel		Epcos Part No.
					1	10	100		Qty.	Pricing	
1	312.2	311.9 - 312.5	1.8	495-2354-1-ND	2.07	1.86	1.56	495-2354-2-ND	9,000	965.00/M	B39311B3712U410
	315	314.7 - 315.3	1.7	495-1667-1-ND	2.07	1.86	1.56	495-1667-2-ND	9,000	965.00/M	B39321B3711U410
	315	314.85 - 315.15	2.4	495-2619-1-ND	2.33	2.10	1.75	495-2619-2-ND	9,000	1164.00/M	B39321B3731H110
	433.92	433 - 434.71	2.0	495-1870-1-ND	2.07	1.86	1.56	495-1870-2-ND	9,000	916.00/M	B39431B3710U410
	433.92	433.7 - 434.14	2.4	495-3691-1-ND	2.33	2.10	1.75	495-3691-2-ND	9,000	1086.00/M	B39431B3730H110
	433.92	433.7 - 434.14	2.2	495-3693-1-ND	2.33	2.10	1.75	495-3693-2-ND	9,000	1086.00/M	B39431B3736H110
	400	399.875 - 400.125	2.3	495-3923-1-ND	1.29	1.17	.97	495-3923-2-ND	9,000	602.00/M	B39401B3742H110
	864	862.5 - 865.5	4.0	495-2353-1-ND	1.50	1.35	1.13	495-2353-2-ND	9,000	700.00/M	B39861B3563U410
	868.3	868.15 - 868.45	3.2	495-3692-1-ND	2.33	2.10	1.75	495-3692-2-ND	9,000	1086.00/M	B39871B3734H110
	869	868 - 870	2.4	495-2361-1-ND	2.33	2.10	1.75	495-2361-2-ND	9,000	1086.00/M	B39871B3715U410
2	915	902 - 928	2.9	495-1674-1-ND	1.08	.98	.81	495-1674-2-ND	9,000	503.00/M	B39921B3588U410
	916	914.25 - 917.75	2.4	495-3690-1-ND	2.33	2.10	1.75	495-3690-2-ND	9,000	1086.00/M	B39921B3718U410
	1575.42	1574.22 - 1576.62	1.3	495-2363-1-ND	2.33	2.10	1.75	495-2363-2-ND	9,000	1086.00/M	B39162B3520U410
	1575.42	1574.42 - 1576.42	3.2	495-3689-1-ND	2.33	2.10	1.75	495-3689-2-ND	9,000	1086.00/M	B39162B3521U410
	1575.42	1574.22 - 1576.62	3.3	495-3699-1-ND	2.33	2.10	1.75	495-3699-2-ND	9,000	1396.00/M	B39162B4050U510
	1575.42	1574.22 - 1576.62	1.3	495-2341-1-ND	2.33	2.10	1.75	495-2341-2-ND	9,000	1086.00/M	B39162B4060U810
	303.8	303.62 - 303.98	3.0	495-2325-1-ND	3.62	3.26	2.72	495-2325-2-ND	3,000	1808.00/M	B39311B3553U310
	311.06	310.94 - 311.18	2.0	495-2326-1-ND	3.62	3.26	2.72	495-2326-2-ND	3,000	1808.00/M	B39311B3577U310
	315	314.84 - 315.16	2.1	495-2329-1-ND	3.36	3.03	2.52	495-2329-2-ND	3,000	1808.00/M	B39321B3751U310
	315	314.9 - 315.1	3.3	495-2327-1-ND	3.87	3.49	2.91	495-2327-2-ND	3,000	1937.00/M	B39321B3576U310
3	345.03	344.9 - 345.1	2.0	495-2330-1-ND	3.62	3.26	2.72	495-2330-2-ND	3,000	1808.00/M	B39351B3559U310
	433.42	433.31 - 433.53	3.3	495-2332-1-ND	2.34	2.11	1.76	495-2332-2-ND	3,000	1170.00/M	B39431B3567U310
	433.92	433.76 - 434.08	2.0	495-2335-1-ND	3.36	3.03	2.52	495-2335-2-ND	3,000	1679.00/M	B39431B3750U310
	433.92	433.83 - 434.01	3.4	495-2289-1-ND	2.34	2.11	1.76	495-2289-2-ND	3,000	1170.00/M	B39431B3575U310
	433.96	433.8 - 434.12	2.2	495-2359-1-ND	1.86	1.68	1.40	495-2359-2-ND	3,000	930.00/M	B39431B3555U310
	434.42	434.26 - 434.58	2.0	495-2336-1-ND	3.36	3.03	2.52	495-2336-2-ND	3,000	1679.00/M	B39431B3757U310
	868.3	868.2 - 868.4	4.2	495-2337-1-ND	2.34	2.11	1.76	495-2337-2-ND	3,000	1170.00/M	B39871B3574U310
	868.39	868 - 868.78	2.7	495-1961-1-ND	2.34	2.11	1.76	495-1961-2-ND	3,000	1170.00/M	B39871B3570U310
	868.69	868 - 869.38	3.1	495-2338-1-ND	3.87	3.49	2.91	495-2338-2-ND	3,000	1937.00/M	B39871B3571U310
	869.69	869.2 - 870.18	2.8	495-2339-1-ND	3.87	3.49	2.91	495-2339-2-ND	3,000	1937.00/M	B39871B3573U310
4	312.2	312.05 - 312.35	1.9	495-2355-1-ND	3.10	2.79	2.33	495-2355-2-ND	3,000	1550.00/M	B39311B3766Z810
	313.85	313.7 - 314	1.9	495-2356-1-ND	3.10	2.79	2.33	495-2356-2-ND	3,000	1550.00/M	B39311B3768Z810
	315	314.5 - 315.5	2.7	495-2328-1-ND	1.77	1.60	1.33	495-2328-2-ND	3,000	885.00/M	B39321B3581Z810
	315	314.85 - 315.15	1.9	495-1668-1-ND	3.10	2.79	2.33	495-1668-2-ND	3,000	1550.00/M	B39321B3761Z810
	315.15	315 - 315.3	1.9	495-2357-1-ND	3.10	2.79	2.33	495-2357-2-ND	3,000	1550.00/M	B39321B3763Z810
	315.5	315.35 - 315.65	1.9	495-2358-1-ND	3.10	2.79	2.33	495-2358-2-ND	3,000	1550.00/M	B39321B3765Z810
	345	344.6 - 345.4	2.5	495-2352-1-ND	3.10	2.79	2.33	495-2352-2-ND	3,000	1550.00/M	B39351B3583Z810
	433.92	433 - 434.71	2.8	495-2334-1-ND	1.77	1.60	1.33	495-2334-2-ND	3,000	885.00/M	B39431B3580Z810
	433.92	433.76 - 434.08	1.9	495-1672-1-ND	3.10	2.79	2.33	495-1672-2-ND	3,000	1550.00/M	B39431B3760Z810
	433.92	433.645 - 434.195	2.0	495-3694-1-ND	3.36	3.03	2.52	495-3694-2-ND	3,000	1679.00/M	B39431B3780Z810
5	433.92	433.86 - 433.98	3.6	495-3695-1-ND	3.36	3.03	2.52	495-3695-2-ND	3,000	1679.00/M	B39431B3790Z810
	460	450 - 470	2.0	495-3924-1-ND	1.95	1.76	1.47	495-3924-2-ND	3,000	975.00/M	B39461B3590Z810
	868.3	868 - 868.6	3.1	495-1673-1-ND	3.36	3.03	2.52	495-1673-2-ND	3,000	1679.00/M	B39871B3762Z810
	914.7	913.9 - 915.5	4.0	495-2340-1-ND	3.10	2.79	2.33	495-2340-2-ND	3,000	1550.00/M	B39821B3705Z810
	942.5	925 - 960	1.4	495-1875-1-ND	1.56	1.41	1.17	495-1875-2-ND	9,000	780.00/M	B39841B7837K410
	1575.42	1574.42 - 1576.42	0.5	495-1880-1-ND	1.59	1.44	1.20	495-1880-2-ND	9,000	742.00/M	B39162B9000C710
	1575.42	1574.42 - 1576.42	1.2	495-3913-1-ND	1.59	1.44	1.20	495-3913-2-ND	9,000	742.00/M	B39162B7839K410
	1575.42	1574.42 - 1576.42	0.75	495-3914-1-ND	1.59	1.44	1.20	495-3914-2-ND	9,000	742.00/M	B39162B7840C710
	2140	2110 - 2170	2.6	495-1873-1-ND	1.83	1.65	1.38	495-1873-2-ND	9,000	854.00/M	B39212B7835C710
	2441.75	2400 - 2483.5	2.2	495-3918-1-ND	2.25	2.03	1.69	495-3918-2-ND	9,000	1050.00/M	B39242B7841C710
6	2140	2110 - 2170	2.4	495-2629-1-ND	1.62	1.46	1.22	495-2629-2-ND	9,000	756.00/M	B39212B7750C810
	1575.42	1574.22 - 1576.62	2.8	495-3696-1-ND	2.33	2.10	1.75	495-3696-2-ND	9,000	1086.00/M	B39162B4059U810
	1575.42	1574.42 - 1576.42	0.9	495-3908-1-ND	1.17	1.06	.88	495-3908-2-ND	9,000	546.00/M	B39162B9037E910
	1575.42	1574.42 - 1576.42	1.2	495-3909-1-ND	1.59	1.44	1.20	495-3909-2-ND	9,000	742.00/M	B39162B9080L310
	1575.42	1574.42 - 1576.42	0.6	495-3910-1-ND	2.10	1.89	1.58	495-3910-2-ND	6,000	980.00/M	B39162B9415K610
	1575.42	1574.42 - 1576.42	0.9	495-3911-1-ND	1.89	1.71	1.42	495-3911-2-ND	6,000	882.00/M	B39162B9416K610
	1575.42	1574.42 - 1576.42	1.1	495-3912-1-ND	1.05	.95	.79	495-3912-2-ND	6,000	490.00/M	B39162B9417K610
	2450	2400 - 2500	2.2	495-3915-1-ND	.87	.79	.66	495-3915-2-ND	6,000	406.00/M	B39252B9430M410
	2450	2400 - 2500	2.4	495-3916-1-ND	1.59	1.44	1.20	495-3916-2-ND	6,000	742.00/M	B39252B9429K610
	2441.75	2400 - 2483.5	2.0	495-3919-1-ND	.87	.79	.66	495-3919-2-ND	15,000	154.00/M	B39242B9413K610
2441.75	2400 - 2483.5	2.0	495-3920-1-ND	1.05	.95	.79	495-3920-2-ND	6,000	490.00/M	B39242B9410K610	

