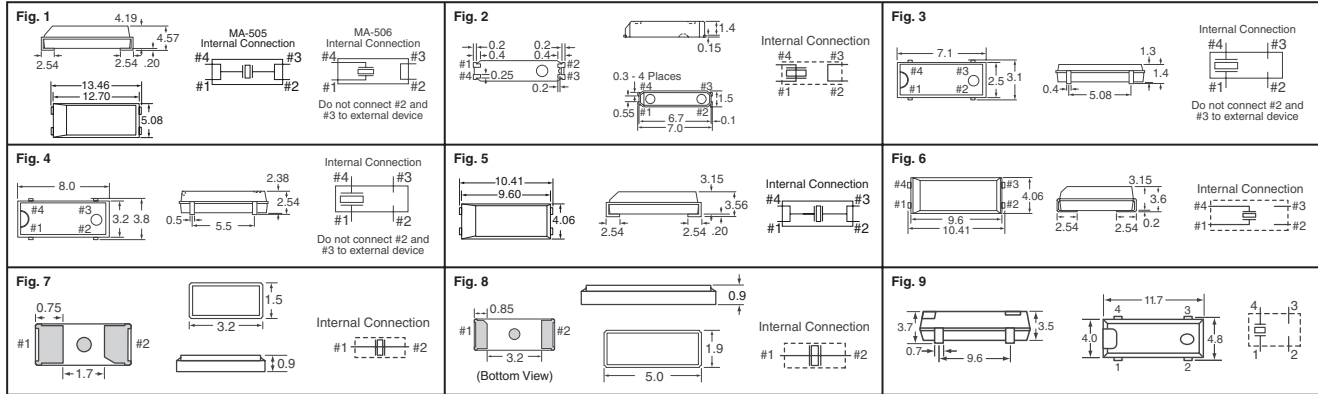


EPSON TOYOCOM Surface Mount Quartz Crystal Products



Features: • Capable of withstanding reflow temperatures of 260°C for 20 seconds • Suitable for use in today's high density surface mount boards

Package	FC-135	FC-255	MA-406	MA-505	MA-506	MC-146	MC-156	MC-306	MC-405	MC-406
Operating Temperature	-40°C - 85°C	-40°C - 85°C	-20°C - 70°C	-20°C - 70°C	-20°C - 70°C	-40°C - 85°C	-40°C - 85°C	-40°C - 85°C	-40°C - 85°C	-40°C - 85°C
Maximum Drive Level	0.5µW	0.5µW	100µW	10µW - 100µW	10µW - 100µW	1.0µW	1.0µW	1.0µW	1.0µW	1.0µW
Frequency Tolerance	±20ppm @ 25°C	±20ppm @ 25°C	±50ppm @ 25°C	±50ppm @ 25°C	±50ppm @ 25°C	±20ppm @ 25°C	±20ppm @ 25°C	±20ppm @ 25°C	±20ppm @ 25°C	±20ppm @ 25°C
Load Capacitance	12.5pF	12.5pF	C: 18pF; G: 20pF	18pF	18pF	9pF	12.5pF	A=12.5pF; E=6pF	12.5pF	12.5pF
Series Resistance	70KΩ Max.	65KΩ Max.	—	—	—	65KΩ Max.	65KΩ Max.	50KΩ Max.	50KΩ Max.	50KΩ Max.
Shunt Capacitance	1.3pF Typ.	1.3pF Typ.	5pF Max.	5pF Max.	5pF Max.	0.8pF	—	0.9pF Max.	0.85pF Typ.	0.85pF



Frequency	Digi-Key Part No.	Cut Tape Price Each		Tape and Reel†		Epson Part No.
		1	50	Qty.	Pricing	
Fig. 1 — MA-505						
4.00000 MHz	SE2518CT-ND	1.94	1.67	1.39	1,000	776.16 MA-505 4.0000M-CO
4.00000 MHz	SER2518CT-ND	1.94	1.67	1.39	1,000	776.16 MA-505 4.0000M-CO:ROHS
4.09600 MHz	SE2519CT-ND	1.94	1.67	1.39	1,000	776.16 MA-505 4.0960M-CO
4.09600 MHz	SER2519CT-ND	1.94	1.67	1.39	1,000	776.16 MA-505 4.0960M-CO:ROHS
4.91520 MHz	SE2520CT-ND	1.94	1.67	1.39	1,000	776.16 MA-505 4.9152M-CO
4.91520 MHz	SER2520CT-ND	1.94	1.67	1.39	1,000	776.16 MA-505 4.9152M-CO:ROHS
6.00000 MHz	SE2501CT-ND	.78	.67	.56	1,000	310.46 MA-505 6.0000M-CO
6.00000 MHz	SER2501CT-ND	.78	.67	.56	1,000	310.46 MA-505 6.0000M-CO:ROHS
7.37280 MHz	SE2503CT-ND	.78	.67	.56	1,000	310.46 MA-505 7.3728M-CO
7.37280 MHz	SER2503CT-ND	.78	.67	.56	1,000	310.46 MA-505 7.3728M-CO:ROHS
8.00000 MHz	SE2504CT-ND	.78	.67	.56	1,000	310.46 MA-505 8.0000M-CO
8.00000 MHz	SER2504CT-ND	.78	.67	.56	1,000	310.46 MA-505 8.0000M-CO:ROHS
9.83040 MHz	SE2524CT-ND	.78	.67	.56	1,000	310.46 MA-505 9.8304M-CO
9.83040 MHz	SER2524CT-ND	.78	.67	.56	1,000	310.46 MA-505 9.8304M-CO:ROHS
10.00000 MHz	SE2505CT-ND	.78	.67	.56	1,000	310.46 MA-505 10.0000M-CO
10.00000 MHz	SER2505CT-ND	.78	.67	.56	1,000	310.46 MA-505 10.0000M-CO:ROHS
10.24000 MHz	SE2525CT-ND	.78	.67	.56	1,000	310.46 MA-505 10.2400M-CO
10.24000 MHz	SER2525CT-ND	.78	.67	.56	1,000	310.46 MA-505 10.2400M-CO:ROHS
11.05920 MHz	SE2506CT-ND	.78	.67	.56	1,000	310.46 MA-505 11.0592M-CO
11.05920 MHz	SER2506CT-ND	.78	.67	.56	1,000	310.46 MA-505 11.0592M-CO:ROHS
12.00000 MHz	SE2507CT-ND	.78	.67	.56	1,000	310.46 MA-505 12.0000M-CO
12.00000 MHz	SER2507CT-ND	.78	.67	.56	1,000	310.46 MA-505 12.0000M-CO:ROHS
14.31800 MHz	SE2528CT-ND	.78	.67	.56	1,000	310.46 MA-505 14.3180M-CO
14.31800 MHz	SER2528CT-ND	.78	.67	.56	1,000	310.46 MA-505 14.3180M-CO:ROHS
14.74560 MHz	SE2529CT-ND	.78	.67	.56	1,000	310.46 MA-505 14.7456M-CO
14.74560 MHz	SER2529CT-ND	.78	.67	.56	1,000	310.46 MA-505 14.7456M-CO:ROHS
16.00000 MHz	SE2508CT-ND	.78	.67	.56	1,000	310.46 MA-505 16.0000M-CO
16.00000 MHz	SER2508CT-ND	.78	.67	.56	1,000	310.46 MA-505 16.0000M-CO:ROHS
18.43200 MHz	SE2533CT-ND	.78	.67	.56	1,000	310.46 MA-505 18.4320M-CO
18.43200 MHz	SER2533CT-ND	.78	.67	.56	1,000	310.46 MA-505 18.4320M-CO:ROHS
19.66000 MHz	SE2535CT-ND	.78	.67	.56	1,000	310.46 MA-505 19.6600M-CO
19.66000 MHz	SER2535CT-ND	.78	.67	.56	1,000	310.46 MA-505 19.6600M-CO:ROHS
20.00000 MHz	SE2509CT-ND	.78	.67	.56	1,000	310.46 MA-505 20.0000M-CO
20.00000 MHz	SER2509CT-ND	.78	.67	.56	1,000	310.46 MA-505 20.0000M-CO:ROHS
24.00000 MHz	SE2510CT-ND	.78	.67	.56	1,000	310.46 MA-505 24.0000M-CO
24.00000 MHz	SER2510CT-ND	.78	.67	.56	1,000	310.46 MA-505 24.0000M-CO:ROHS
24.57600 MHz	SE2538CT-ND	.78	.67	.56	1,000	310.46 MA-505 24.5760M-CO
24.57600 MHz	SER2538CT-ND	.78	.67	.56	1,000	310.46 MA-505 24.5760M-CO:ROHS
25.00000 MHz	SE2539CT-ND	.78	.67	.56	1,000	310.46 MA-505 25.0000M-CO
25.00000 MHz	SER2539CT-ND	.78	.67	.56	1,000	310.46 MA-505 25.0000M-CO:ROHS
29.49120 MHz	SE2543CT-ND	.78	.67	.56	1,000	310.46 MA-505 29.4912M-CO(30T)
29.49120 MHz	SER2543CT-ND	.78	.67	.56	1,000	310.46 MA-505 29.4912M-CO(30T):ROHS
30.00000 MHz	SE2544CT-ND	.78	.67	.56	1,000	310.46 MA-505 30.0000M-CO
30.00000 MHz	SER2544CT-ND	.78	.67	.56	1,000	310.46 MA-505 30.0000M-CO:ROHS
32.76800 MHz	SE2546CT-ND	.78	.67	.56	1,000	310.46 MA-505 32.7680M-CO
32.76800 MHz	SER2546CT-ND	.78	.67	.56	1,000	310.46 MA-505 32.7680M-CO:ROHS
36.00000 MHz	SE2548CT-ND	.78	.67	.56	1,000	310.46 MA-505 36.0000M-CO
40.00000 MHz	SE2515CT-ND	.78	.67	.56	1,000	310.46 MA-505 40.0000M-CO
40.00000 MHz	SER2515CT-ND	.78	.67	.56	1,000	310.46 MA-505 40.0000M-CO:ROHS
Fig. 1 — MA-506						
4.00000 MHz	SE2618CT-ND	1.94	1.67	1.39	1,000	776.16 MA-506 4.0000M-CO
4.00000 MHz	SER2618CT-ND	1.94	1.67	1.39	1,000	776.16 MA-506 4.0000M-CO:ROHS
4.09600 MHz	SE2619CT-ND	1.94	1.67	1.39	1,000	776.16 MA-506 4.0960M-CO
4.09600 MHz	SER2619CT-ND	1.94	1.67	1.39	1,000	776.16 MA-506 4.0960M-CO:ROHS
4.91520 MHz	SE2620CT-ND	1.94	1.67	1.39	1,000	776.16 MA-506 4.9152M-CO
4.91520 MHz	SER2620CT-ND	1.94	1.67	1.39	1,000	776.16 MA-506 4.9152M-CO:ROHS
6.00000 MHz	SE2601CT-ND	.78	.67	.56	1,000	310.46 MA-506 6.0000M-CO
6.00000 MHz	SER2601CT-ND	.78	.67	.56	1,000	310.46 MA-506 6.0000M-CO:ROHS

Frequency	Digi-Key Part No.	Cut Tape Price Each		Tape and Reel†		Epson Part No.
		1	50	Qty.	Pricing	
Fig. 2 — MC-146						
32.76800 KHz	SE2416CT-ND	.97	.84	.70	250	138.60 MC-146 32.768KA-AC3
32.76800 KHz	SER2416CT-ND	.97	.84	.70	250	138.60 MC-146 32.768KA-AC3:ROHS

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.

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