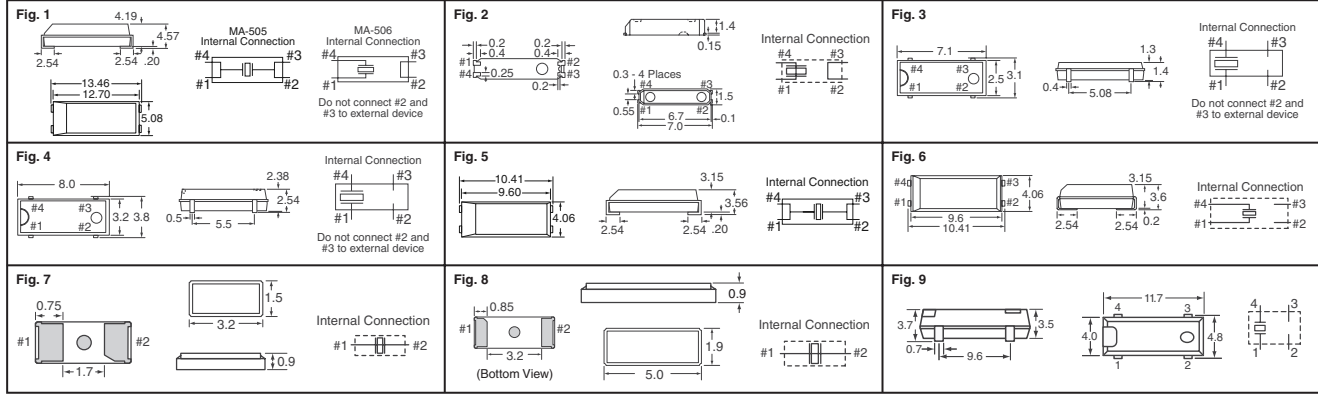


EPSON TOYOCOM Surface Mount Quartz Crystal Products



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	3.35	2.87	2.39	1,000	1338.36 MA-505 4.0000M-CO
4.00000 MHz	SER2518CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-505 4.0000M-CO:ROHS
4.09600 MHz	SE2519CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-505 4.0960M-CO
4.09600 MHz	SER2519CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-505 4.0960M-CO:ROHS
4.91520 MHz	SE2520CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-505 4.9152M-CO
4.91520 MHz	SER2520CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-505 4.9152M-CO:ROHS
6.00000 MHz	SE2501CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 6.0000M-CO
6.00000 MHz	SER2501CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 6.0000M-CO:ROHS
7.37280 MHz	SE2503CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 7.3728M-CO
7.37280 MHz	SER2503CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 7.3728M-CO:ROHS
8.00000 MHz	SE2504CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 8.0000M-CO
8.00000 MHz	SER2504CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 8.0000M-CO:ROHS
9.83040 MHz	SE2524CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 9.8304M-CO
9.83040 MHz	SER2524CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 9.8304M-CO:ROHS
10.00000 MHz	SE2505CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 10.0000M-CO
10.00000 MHz	SER2505CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 10.0000M-CO:ROHS
10.24000 MHz	SE2525CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 10.2400M-CO
10.24000 MHz	SER2525CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 10.2400M-CO:ROHS
11.05920 MHz	SE2506CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 11.0592M-CO
11.05920 MHz	SER2506CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 11.0592M-CO:ROHS
12.00000 MHz	SE2507CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 12.0000M-CO
12.00000 MHz	SER2507CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 12.0000M-CO:ROHS
14.31800 MHz	SE2528CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 14.3180M-CO
14.31800 MHz	SER2528CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 14.3180M-CO:ROHS
14.74560 MHz	SE2529CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 14.7456M-CO
14.74560 MHz	SER2529CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 14.7456M-CO:ROHS
16.00000 MHz	SE2508CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 16.0000M-CO
16.00000 MHz	SER2508CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 16.0000M-CO:ROHS
18.43200 MHz	SE2533CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 18.4320M-CO
18.43200 MHz	SER2533CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 18.4320M-CO:ROHS
19.66000 MHz	SE2535CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 19.6600M-CO
19.66000 MHz	SER2535CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 19.6600M-CO:ROHS
20.00000 MHz	SE2509CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 20.0000M-CO
20.00000 MHz	SER2509CT-ND	1.34	1.15	.96	1,000	535.34 MA-505 20.0000M-CO:ROHS
24.00000 MHz	SE2510CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 24.0000M-CO
24.00000 MHz	SER2510CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 24.0000M-CO:ROHS
24.57600 MHz	SE2538CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 24.5760M-CO
24.57600 MHz	SER2538CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 24.5760M-CO:ROHS
25.00000 MHz	SE2539CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 25.0000M-CO
25.00000 MHz	SER2539CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 25.0000M-CO:ROHS
29.49120 MHz	SE2543CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 29.4912M-CO
29.49120 MHz	SER2543CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 29.4912M-CO:ROHS
30.00000 MHz	SE2544CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 30.0000M-CO
30.00000 MHz	SER2544CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 30.0000M-CO:ROHS
32.76800 MHz	SE2546CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 32.7680M-CO
32.76800 MHz	SER2546CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 32.7680M-CO:ROHS
36.00000 MHz	SE2548CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 36.0000M-CO
40.00000 MHz	SE2515CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 40.0000M-CO
40.00000 MHz	SER2515CT-ND	1.26	1.08	.90	1,000	502.73 MA-505 40.0000M-CO:ROHS
Fig. 1 — MA-506						
4.00000 MHz	SE2618CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-506 4.0000M-CO
4.00000 MHz	SER2618CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-506 4.0000M-CO:ROHS
4.09600 MHz	SE2619CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-506 4.0960M-CO
4.09600 MHz	SER2619CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-506 4.0960M-CO:ROHS
4.91520 MHz	SE2620CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-506 4.9152M-CO
4.91520 MHz	SER2620CT-ND	3.35	2.87	2.39	1,000	1338.36 MA-506 4.9152M-CO:ROHS
6.00000 MHz	SE2601CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 6.0000M-CO
6.00000 MHz	SER2601CT-ND	1.34	1.15	.96	1,000	535.34 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	
6.14400 MHz	SE2602CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 6.1440M-CO
6.14400 MHz	SER2602CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 6.1440M-CO:ROHS
7.37280 MHz	SE2603CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 7.3728M-CO
7.37280 MHz	SER2603CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 7.3728M-CO:ROHS
8.00000 MHz	SE2604CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 8.0000M-CO
8.00000 MHz	SER2604CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 8.0000M-CO:ROHS
9.83000 MHz	SE2624CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 9.8300M-CO
9.83000 MHz	SER2624CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 9.8300M-CO:ROHS
10.00000 MHz	SE2605CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 10.0000M-CO
10.00000 MHz	SER2605CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 10.0000M-CO:ROHS
10.24000 MHz	SE2625CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 10.2400M-CO
11.00000 MHz	SE2626CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 11.0000M-CO
11.05920 MHz	SE2606CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 11.0592M-CO
11.05920 MHz	SER2606CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 11.0592M-CO:ROHS
12.00000 MHz	SE2607CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 12.0000M-CO
12.00000 MHz	SER2607CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 12.0000M-CO:ROHS
12.28800 MHz	SE2627CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 12.2880M-CO
12.28800 MHz	SER2627CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 12.2880M-CO:ROHS
14.31818 MHz	SE2628CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 14.31818M-CO:ROHS
14.74560 MHz	SE2629CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 14.7456M-CO
14.74560 MHz	SER2629CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 14.7456M-CO:ROHS
15.00000 MHz	SE2630CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 15.0000M-CO
16.00000 MHz	SE2608CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 16.0000M-CO
16.00000 MHz	SER2608CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 16.0000M-CO:ROHS
16.25700 MHz	SE2631CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 16.2570M-CO
18.00000 MHz	SE2632CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 18.0000M-CO
18.00000 MHz	SER2632CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 18.0000M-CO:ROHS
18.43200 MHz	SE2633CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 18.4320M-CO
18.43200 MHz	SER2633CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 18.4320M-CO:ROHS
19.66800 MHz	SE2635CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 19.6680M-CO
20.00000 MHz	SE2609CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 20.0000M-CO
20.00000 MHz	SER2609CT-ND	1.34	1.15	.96	1,000	535.34 MA-506 20.0000M-CO:ROHS
20.48000 MHz	SE2636CT-ND	1.26	1.08	.90	1,000	502.73 MA-506 20.4800M-CO
22.11840 MHz	SE2637CT-ND	1.26	1.08	.90	1,000	502.73 MA-506 22.1184M-CO
22.11840 MHz	SER2637CT-ND	1.26	1.08	.90	1,000	502.73 MA-506 22.1184M-CO:ROHS
24.00000 MHz	SE2610CT-ND	1.26	1.08	.90	1,000	502.73 MA-506 24.0000M-CO
24.00000 MHz	SER2610CT-ND	1.26	1.08	.90	1,000	502.73 MA-506 24.0000M-CO:ROHS
24.57600 MHz	SE2638CT-ND	1.26	1.08	.90	1,000	502.73 MA-506 24.5760M-CO
24.57600 MHz	SER2638CT-ND	1.26	1.08	.90	1,000	502.73 MA-506 24.5760M-CO:ROHS
25.00000 MHz	SE2639CT-ND	1.26	1.08	.90	1,000	502.73 MA-506 25.0000M-CO
25.00000 MHz	SER2639CT-ND	1.26	1.08			