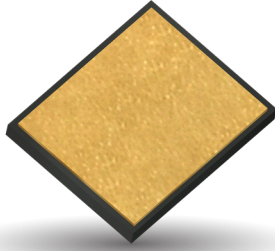


MS Series

MOS (Metal Oxide Semiconductor) Capacitors

MIS (Metal Insulator Semiconductor) Capacitors



GENERAL DESCRIPTION

For applications in RF, microwave, and GHz ranges, AVX now offers MOS and MIS Capacitors. MOS Capacitors are Single Layer Capacitors (SLCs) that use silicon dioxide to produce small, high Q, temperature stable, high breakdown voltage, low leakage capacitors. To ease assembly, AVX offers a wide range of termination styles for epoxy or solder die attach and subsequent Gold or Aluminum wire thermosonic and ultrasonic bonding. Custom applications and designs are welcome. Please contact your local representative.

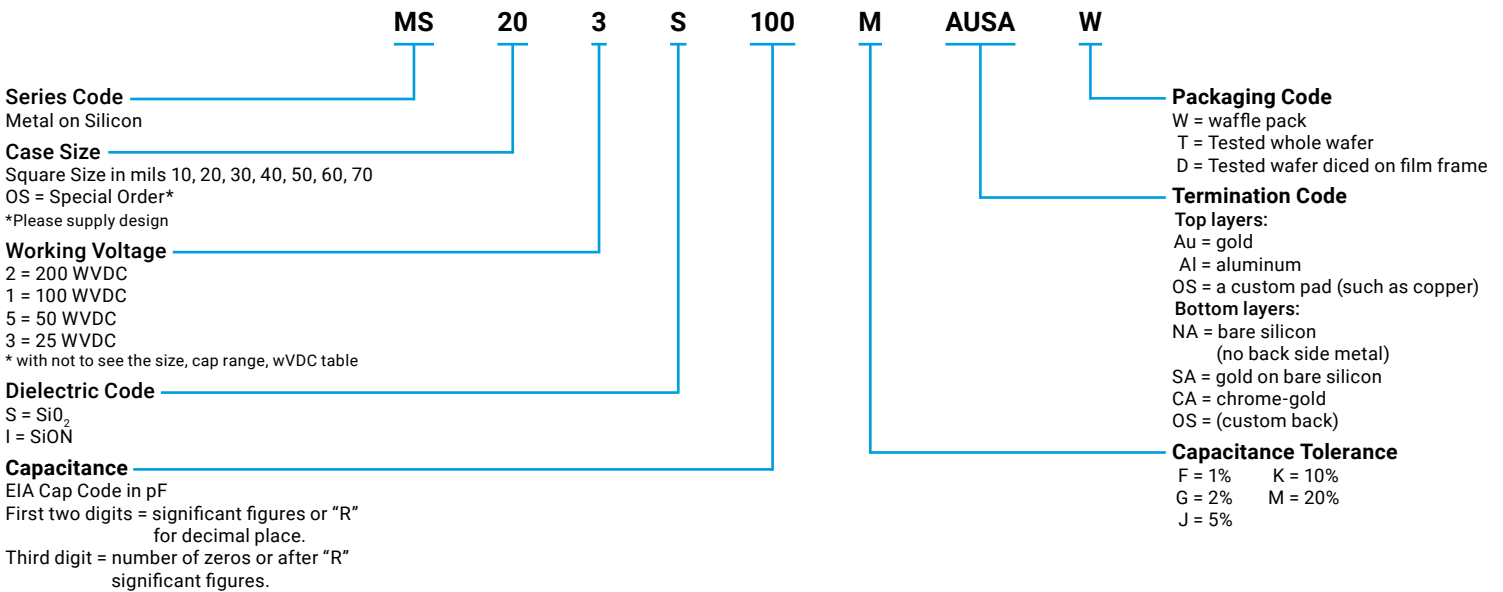
FEATURES

- Small Size: .010 to .070 inches square
- Capacitance Range: 1.0 to 1000pF
- High Q
- DC to 20GHz operation

APPLICATIONS

- Hybrid circuits
- Bias Networks
- Test and Measurement Equipment
- Aerospace
- TOSA and ROSA applications

HOW TO ORDER



MIL TEST METHODS

Standard Test Method	MIL Reference	MIL Section
Bond Strength	MIL-STD-883	2011.7
Shear Strength	MIL-STD-883	2019
Thermal Shock	MIL-STD-202	107
Life	MIL-STD-202	108
Load Humidity (THB)	MIL-STD-202	103 @rated VDC

TYPICAL ELECTRICAL SPECIFICATIONS

Material	MOS(SiO ₂)
pF/mm ² Typical	85 @ 50V rated
TCC	±30 ppm/°C
Rated Voltage	≤200
Peak Voltage at +25°C	1.5 x Rated
DF	≤0.1%
Operating Temp. Range	-55°C to 125°C

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SIZE, CAPACITANCE RANGE, WVDC

Chip Area mil ² (mm ²)	Typical Case Size (Square) mil (mm)	Breakdown Voltage (V)	MOS		MIS	
			Min Value pF	Max Value pF	Min Value pF	Max Value pF
100 (0.064516)	10 (0.254)	200		1	1	2
100 (0.064516)	10 (0.254)	100	2	3	3	5
100 (0.064516)	10 (0.254)	50	4	6	6	9
100 (0.064516)	10 (0.254)	25	7	12	10	19
400 (0.258064)	20 (0.508)	200	1	9	1	14
400 (0.258064)	20 (0.508)	100	10	19	15	29
400 (0.258064)	20 (0.508)	50	20	38	30	58
400 (0.258064)	20 (0.508)	25	39	75	59	115
900 (0.580644)	30 (0.762)	200	1	24	1	35
900 (0.580644)	30 (0.762)	100	25	49	36	70
900 (0.580644)	30 (0.762)	50	50	95	71	145
900 (0.580644)	30 (0.762)	25	96	190	146	290
1600 (1.032256)	40 (1.016)	200	1	45	1	65
1600 (1.032256)	40 (1.016)	100	46	90	66	135
1600 (1.032256)	40 (1.016)	50	91	185	136	275
1600 (1.032256)	40 (1.016)	25	186	370	276	550
2500 (1.6129)	50 (1.27)	200	1	75	1	112
2500 (1.6129)	50 (1.27)	100	76	150	113	225
2500 (1.6129)	50 (1.27)	50	151	300	226	450
2500 (1.6129)	50 (1.27)	25	301	600	451	900
3600 (2.322576)	60 (1.524)	200	1	110	1	165
3600 (2.322576)	60 (1.524)	100	111	220	166	330
3600 (2.322576)	60 (1.524)	50	221	440	331	660
3600 (2.322576)	60 (1.524)	25	441	880	661	1320
4900 (3.161284)	70 (1.778)	200	1	150	1	225
4900 (3.161284)	70 (1.778)	100	151	300	226	450
4900 (3.161284)	70 (1.778)	50	301	600	451	900
4900 (3.161284)	70 (1.778)	25	601	1200	901	1800

*Size tolerance ± 1 mil (0.025 mm)
Thickness range 5 to 10 mils (0.127 to 0.250 mm)

MS Series

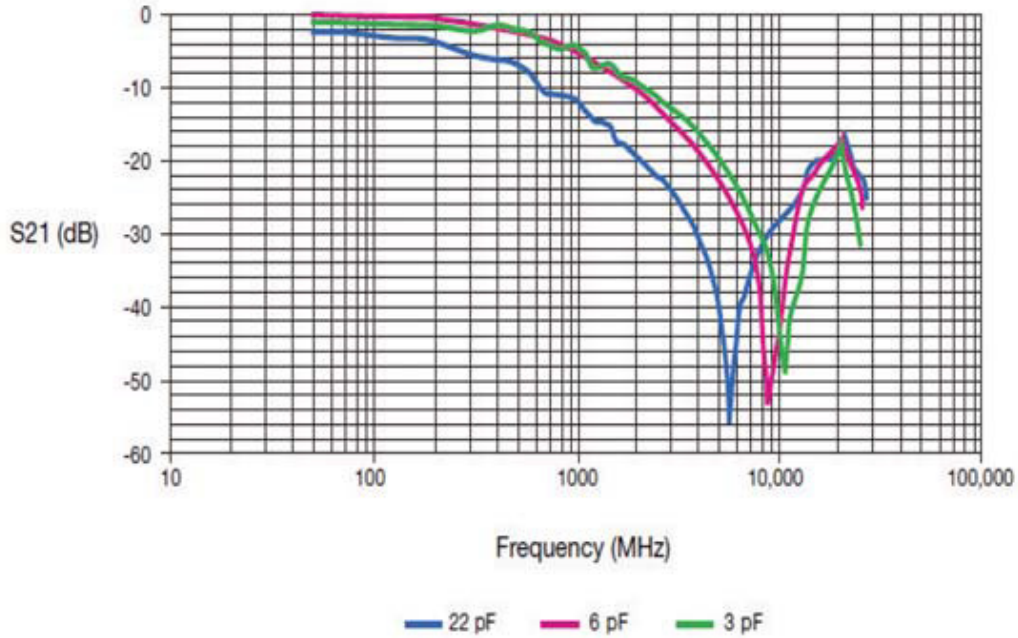
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S21 AND Q VERSUS FREQUENCY

Typical MOS Caps: 50MHz-25GHz
Au/TaN bond pad, Cr/Au back side



22pF Q vs. Frequency

