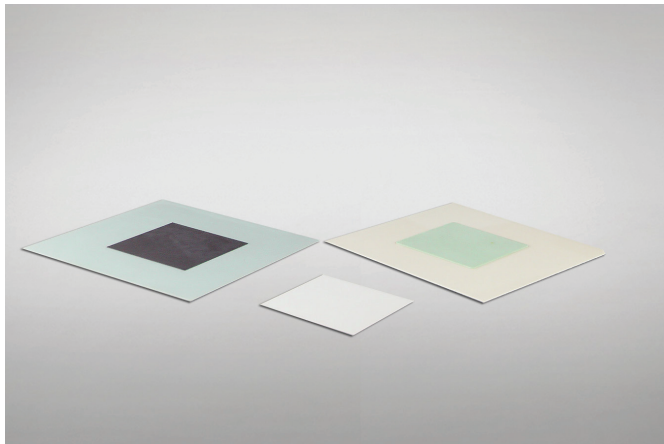


DIELECTRIC SUBSTRATES



Dielectric Substrates

MCV-Microwave, a volume supplier of dielectric substrates offers a wide section of RF & Microwave substrates exhibiting low loss, dielectric constants from 9.0 to 194, excellent temperature stability, and high density. They are ideally suited for microwave integrated circuits and high Q capacitors. Surface finishes for these substrates are available for thick or thin film metallization.

Temperature coefficient of dielectric constant can be custom tailored based on customer specifications.

Material Availability

Series	Dielectric Constant ϵ_r	τ_f (ppm/°C)	Q Values
DMR-9	9 ± 1	6 ± 5	> 58,000 (@ 9.5GHz)
DMR-21	21 ± 1	5 ± 5	> 60,000 (@ 6.5GHz)
DMR-24	24 ± 1	1~3 ± 1	> 300,000 (@ 10GHz)
DMR-30	30 ± 1	0 ± 2	> 150,000 (@ 10GHz)
DMR-34	34 ± 1	2~3 ± 1	> 150,000 (@ 10GHz)
DMR-36	36 ± 2	0 ± 5	> 30,000 (@ 5GHz)
DMR-38	38 ± 1	0.7 ± 0.5	> 47,000 (@ 5.0GHz)
DMR-40	40 ± 1	3 ± 5	> 70,000 (@ 5.0GHz)
DMR-45	46 ± 1	-2~6 ± 0.5	> 43,000 (@ 6.0GHz)
DMR-47	47 ± 1	0 ± 10	> 46,000 (@ 6.0GHz)
DMR-70	72 ± 1	0 ± 2	> 9,000 (@ 3.5GHz)
DMR-77M	77 ± 1	-1~5 ± 2	> 10,000 (@ 3.5GHz)
DMR-88M	80 ± 1	-1~5 ± 2	> 8,000 (@ 1.5GHz)
DMR-90	93 ± 1	9 ± 4	> 6,000 (@ 3.0GHz)
DMR-90N	93 ± 1	9 ± 4	> 5,800 (@ 3.0GHz)
DMR-96	98 ± 2	10 ± 4	> 4,500 (@ 3.5GHz)
DMR-113	113 ± 3	20 ± 10	> 3,000 (@ 2.0GHz)
DMR-190	194 ± 3	25 ± 10	> 1,300 (@ 3.0GHz)
DMR-325	4000 ± 500	± 10%	tanδ1.0%

Available Sizes & Tolerances

Standard Sizes	Minimum Thickness
1 x 1	.005", .010"
2 x 2	.005", .010"

Note: (1) Custom Sizes and tolerances available.
 (2) Contract thick film metallization is available.