

# Dielectric Resonator Oscillator Model MDR2100

## Free Running, Mechanically Tuned 2.5 to 21.0 GHz

### Specifications <sup>(1):</sup>

Frequency Range: <sup>(2)</sup>	2.5-6.0 GHz	6.0-21.0 GHz
Mechanical Tuning Bandwidth (min.)	±10 MHz	±20 MHz
Stability (max.) <sup>(3)</sup>	5 ppm/ °C	5 ppm/ °C
Pulling, 12 dB RL (max.)	±100 ppm	±100 ppm
Pushing (max.)	20 ppm/Volt	20 ppm/Volt
Harmonics (max.)	-15 dBc	-15 dBc
Spurious (max.)	-70 dBc	-70 dBc
Output Power (min.) <sup>(4)</sup>	+10 dBm	+10 dBm

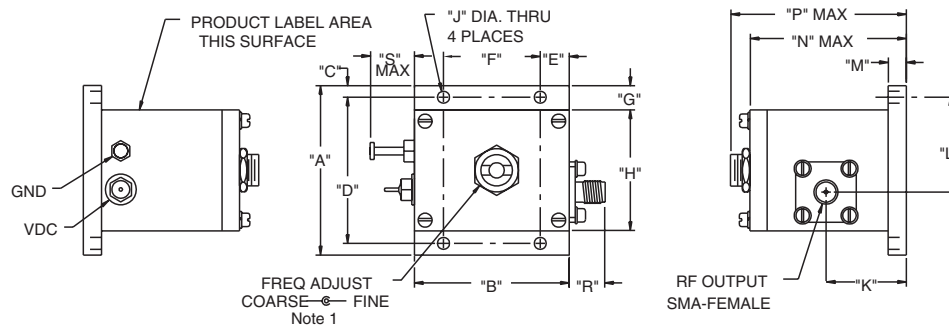
Frequency (GHz)	Outline
2.5 to 6.0	DD2A
4.0 to 10.0	DD1
6.0 to 14.0	DD
10.0 to 14.0	DD4
14.0 to 21.0	DD6

Phase Noise (typ.)	2.5 GHz	6 GHz	12 GHz	20 GHz
10 kHz Offset, dBc/Hz	-105	-99	-93	-88
100 kHz Offset, dBc/Hz	-130	-124	-118	-113
1 MHz Offset, dBc/Hz	-150	-144	-138	-133

Input DC <sup>(5)</sup>	+12 VDC ±3% @ 125 mA max.
Operating Temperature	-20 to +65°C
RF Connector	SMA Female
DC Connector	Solder Pin

#### Notes:

- Specifications labeled "min." or "max." are guaranteed in a 50 Ohm system over the specified temperature range.
- Output frequency must be specified.
- Averaged over the full temperature range.
- Higher output power is available.
- Alternate input voltage available.
- Package must be verified by Spectrum Microwave.



DIMENSIONS: INCHES

OUTLINE	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	"M"	"N"	"P"	"R"	"S"
"DD"	1.65	1.46	.15	1.350	.36	.726	.32	1.00	.140	.76	.92	.16	1.55	1.70	.38	.40
"DD1"	1.75	1.60	.12	1.500	.30	1.000	.25	1.25	.125	.83	.98	.19	1.70	2.00	.38	.40
"DD2A"	1.75	2.00	.12	1.500	.50	1.000	.25	1.25	.125	.83	.96	.19	1.75	2.00	.38	.40
"DD4"	1.65	1.18	.15	1.350	.22	.750	.32	1.00	.125	.84	.77	.19	1.55	1.70	.38	.40
"DD6"	1.65	1.46	.15	1.350	.36	.726	.32	1.00	.140	.83	.71	.16	1.55	1.70	.38	.40

DIMENSIONS: MM

OUTLINE	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	"M"	"N"	"P"	"R"	"S"
"DD"	41.9	37.1	3.8	34.29	9.1	18.44	8.1	25.4	3.6	19.3	23.4	4.0	39.4	43.2	9.7	10.2
"DD1"	44.5	40.6	3.0	38.10	7.6	25.40	6.4	31.8	3.2	21.1	24.9	4.8	43.2	50.8	9.7	10.2
"DD2A"	44.5	50.8	3.0	38.10	12.7	25.40	6.4	31.8	3.2	21.1	24.4	4.8	44.5	50.8	9.7	10.2
"DD4"	41.9	30.0	3.8	34.29	5.6	19.05	8.1	25.4	3.2	21.3	19.6	4.8	39.4	43.2	9.7	10.2
"DD6"	41.9	37.1	3.8	34.29	9.1	18.44	8.1	25.4	3.6	21.1	18.0	4.0	39.4	43.2	9.7	10.2

All dimensions are in inches and [mm].

- Outline DD4 uses a separate adjustment screw for coarse and fine tune vs. the concentric adjustment shown.

DROS

