

MLSP PERFORMANCE SPECIFICATIONS (Continued)

Phase Noise Performance (dBc/Hz) MLSP-2020 2 - 20 GHz

(with Internal Crystal Reference)

| Frequency Range | 2 - 8 GHz | 8 - 16 GHz | 16 - 18 GHz |
|------------------|-----------|------------|-------------|
| @ 100 Hz Offset | -76 | -72 | -72 |
| @ 1 kHz Offset | -92 | -87 | -79 |
| @ 10 kHz Offset | -93 | -85 | -72 |
| @ 100 kHz Offset | -114 | -107 | -95 |
| @ 1MHz Offset | -142 | -135 | -125 |

| Model No. | MLSP-2018 | MLSP-2020 |
|-----------|-----------|-----------|
|-----------|-----------|-----------|

Reference Oscillator Options

Option A

| | | |
|-----------------------------|---------------|---------------|
| External Reference (Note 3) | 1 - 200 MHz | 1 - 200 MHz |
| External Ref. Input Power | 0 +/- 3 dBm | 0 +/- 3 dBm |
| Frequency Stability | Cust Supplied | Cust Supplied |

Option B

| | | |
|---|---------------|---------------|
| External Reference with Internal Crystal (Note 4) | 1 - 100 MHz | 1 - 100 MHz |
| External Ref. Input Power | 0 +/- 3 dBm | 0 +/- 3 dBm |
| Frequency Stability | Cust Supplied | Cust Supplied |

Option C

| | | |
|---------------------|-----------|-----------|
| Internal Reference | 100 MHz | 100 MHz |
| Frequency Stability | +/- 1 PPM | +/- 1 PPM |

Supply Voltage & Current (Note 5)

| | | |
|----------------------------|----------|----------|
| +15 Vdc (± 0.5) Vdc) | 1975 mA | 2075 mA |
| +5 Vdc (± 0.25) Vdc) | 350 mA | 350 mA |
| Power dissipation | 31 watts | 33 watts |

Supply Voltage Ripple

(Pk-Pk from 60 Hz to 3 MHz)

| | |
|--------|--------|
| <50 mV | <50 mV |
|--------|--------|

Control Format

| | |
|---------------|---------------|
| 5-Line Serial | 5-Line Serial |
| USB | USB |

Phase Lock Alarm (P13) (TTL)

| | |
|----------|----------|
| 1=Locked | 1=Locked |
|----------|----------|

Weight

| | |
|---------------|---------------|
| 15 oz / 426 g | 15 oz / 426 g |
|---------------|---------------|

MLSP Options:

Option A: External Reference / No Internal Reference

Option B: Internal Reference / External Reference

Option C: Internal Reference / No External Reference, Drawing 181-003 & 181-004

Option D: RF Connectors Front, Drawing 181-001

Option E: RF Connectors Side, Drawing 181-002

Part Number Example: MLSP-2020BD 2 GHz to 20 GHz with Internal Reference and External Reference with RF connectors on front.

Notes:

- 1) Special operating temperature range available.
- 2) Special frequency ranges available.
- 3) 50-100 MHz OXCO recommended for best phase noise performance. External reference directly effects phase noise performance.
- 4) Output phase noise performance is not dependent on external reference phase noise.
- 5) All values stated for units with external reference. For internal reference add 125mA on the +15 Vdc line.