



B1100 OSCILLATOR SERIES

DIL-14 PACKAGE; HCMOS/TTL OUTPUT



Features:

- 250 KHz to 800 MHz Frequency Range
- Industry Standard DIL-14 Thru Hole Package
- HCMOS/TTL Output Logic
- SMD Lead Forming (Gull Wing) Available
- Low Cost, Excellent for 16 and 32 Bit MPU's
- **RoHS Compliant**
- 24 – 72 Hour 1wk/2wk Facilitated Manufacturing Available*
- ± 10 –100ppm Frequency Stability Options Available
- Extended Temperature Range Options Available
- Very Low Phase Noise
- Tri-State Output Available On Pin #1
- Open Crystal or Encapsulated UM-1 Crystal Design

ELECTRICAL SPECIFICATIONS

| | | | | | | |
|------------------------------|---|--|-------------|-------------|-------------|-------------|
| Supply Voltage (Vcc) | +5.0 Vdc $\pm 5\%$; +3.3Vdc $\pm 5\%$ | | | | | |
| Frequency Range | 1.0 to 200.0 MHz | | | | | |
| Operating Temperature Range | 0°C to 50°C / 0°C to 70°C / -20°C to +70°C / -40°C to +85°C | | | | | |
| Frequency Stability | ± 10 ppm; ± 15.0 ppm; ± 20 ppm; ± 25 ppm; ± 50 ppm; ± 100 ppm | | | | | |
| Supply Current | 20mA Maximum @ 20MHz | | | | | |
| Rise and Fall Time | 10nS Maximum (3nS Typical) | | | | | |
| Enable Time (Tri-State Only) | 100nS Maximum | | | | | |
| Start Up Time | 10ms Maximum (5mS Typical) | | | | | |
| Output Load | HCMOS 15pF / 10TTL | | | | | |
| Symmetry | 60/40% / 55/45% / 52.5/47.5% | | | | | |
| Storage Temperature | -55°C to 125°C | | | | | |
| Frequency Stability Vs. | Supply Voltage | ± 1.0 ppm (V _{cc} $\pm 5\%$ change) | | | | |
| | Load Changes | ± 1.0 ppm (Load $\pm 5\%$ change) | | | | |
| | Aging | ± 1.0 ppm | | | | |
| SSB PHASE NOISE | Offset | 10 Hz | 100 Hz | 1 kHz | 10 kHz | 100 kHz |
| | @ 10.0 MHz | -95 dBc/Hz | -125 dBc/Hz | -145 dBc/Hz | -155 dBc/Hz | -155 dBc/Hz |
| | @ 40.0 MHz | -80 dBc/Hz | -115 dBc/Hz | -140 dBc/Hz | -150 dBc/Hz | -155 dBc/Hz |
| | @ 120.0 MHz | -75 dBc/Hz | -110 dBc/Hz | -135 dBc/Hz | -120 dBc/Hz | -115 dBc/Hz |

AVAILABLE FREQUENCY STABILITY OVER OPERATING TEMPERATURE RANGE TABLE

| | | | | | | |
|---------------------|---------------|--------------|--------------|--------------|--------------|---------------|
| Frequency Stability | ± 10 ppm | ± 15 ppm | ± 20 ppm | ± 25 ppm | ± 50 ppm | ± 100 ppm |
| Temperature Range | 0°C to 50°C | Available | Available | Available | Available | Available |
| | 0°C to 70°C | UM-1 only* | UM-1 only* | Available | Available | Available |
| | -20°C to 70°C | Contact Us** | Contact Us** | Contact Us** | Available | Available |
| | -40°C to 85°C | Contact Us** | Contact Us** | Contact Us** | Contact Us** | Available |

*Only Available in 7.5mm Height with UM-1 Crystal design ;

** Contact us at 800-229-8033 / 631-242-8033 or email quality@brookdale.com to discuss your options.

PART NUMBER TABLE

| Model | Stability | Logic | Symmetry | Tri-State | Operating Temp. (°C) | Voltage | Package Height "H" |
|-------|--------------------|----------------|-------------------|---------------------|----------------------|---------------|--------------------|
| B11 | 10 = ± 10 ppm | T = TTL | Blank = 60 / 40% | Blank = N/C PIN # 1 | Blank = 0°C to 70°C | Blank = +5.0V | Blank = 5.08 mm |
| | 15 = ± 15 ppm | C = HCMOS | S = 55 / 45% | E = Enable PIN # 1 | B = 0°C to 50°C | 3 = +3.3V | 2 = 6.8 mm |
| | 20 = ± 20 ppm | CT = HCMOS/TTL | ST = 52.5 / 47.5% | | D = -20°C to 70°C | | w/ UM1 Crystal |
| | 25 = ± 25 ppm | | | | M = -40°C to 85°C | | |
| | 50 = ± 50 ppm | | | | | | |
| | 00 = ± 100 ppm | | | | | | |

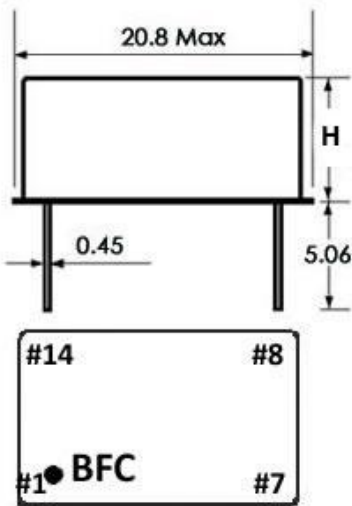
Followed By The Frequency In MHz

For GULL WING Option Add Suffix "G" After the Part Number

PART NUMBER EXAMPLE

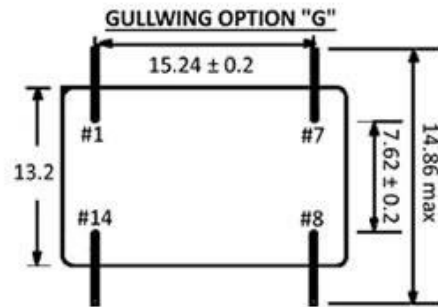
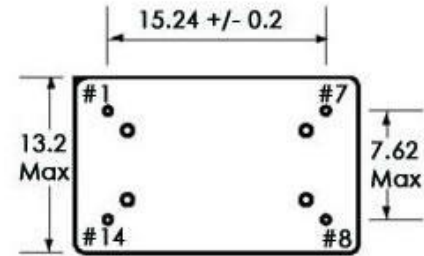
B1100CTSEM32-12.000MHz =

B11 Series with ± 100 ppm Frequency Stability, HCMOS/TTL Logic, 55/45% Symmetry, Tri-State Function On Pin 1, -40°C to 85°C Operating Temperature Range, With a +3.3V Supply Voltage and UM1 Crystal Design with a 6.8mm Package height At 12.000MHz



H=Package Height
 Blank = 5.08mm Max.
 2 = 6.80mm Max.

| PIN CONNECTION | PIN # |
|----------------|-------|
| N/C or E/D | #1 |
| GROUND | #7 |
| OUTPUT | #8 |
| SUPPLY VOLTAGE | #14 |



CRYSTAL DESIGN /FREQUENCY RANGE TABLE

| | | | |
|-------------------|---------------------|-------------------|--------|
| Fund | 40MHz Open blank | 75MHz | 200MHz |
| | UM-1 CRYSTAL | MESA UM-1 CRYSTAL | |
| 3 rd | 30MHz | 80MHz | 160MHz |
| | Open blank | UM-1 CRYSTAL | |
| PLL Multiplier | 20MHz | | 800MHz |
| | UM-1 CRYSTAL | | |
| Analog Multiplier | | 100MHz | 800MHz |
| | | UM-1 CRYSTAL | |

APPLICATIONS

- SONET / SDH / DWDM
- Ethernet, Gigabit Ethernet
- Storage Area Networks
- Digital Video
- Broadband Access

