



Applications:

- Portable Consumer Products
- Wireless Phones and GPS Equipment



Features:

- Miniature (5mm x 7mm) Package
- Clipped Sine Wave Output
- Hermetically Sealed Package

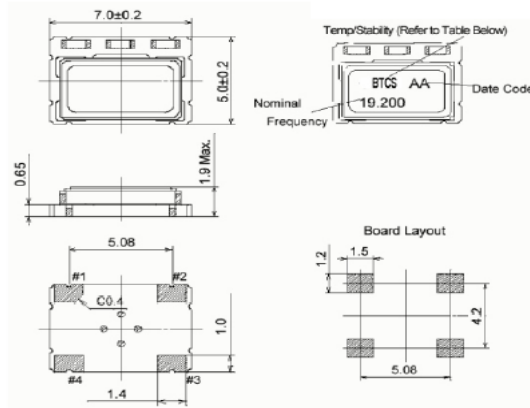
Electrical Specifications

Model	BT1657CS	
Frequency Range (MHz)	1.5 to 20	
Input Current (mA)	< 2	
Frequency Stability (ppm)		
Over Operating Temperature	±1.0	
10 Year Aging (ppm)	±3.5	
Overall Stability for 10 Years	±5.0	
Temperature Range (°C)		
Operating	0°C to +70°C	
Storage	-40°C to +85°C	
Supply Voltage (V)	+3.3±5%	
Output	Clipped Sine Wave	
Load	10K Ω /10pF	
Level	0.8V p-p min.	
Start Up Time (ms)	<5	
Typical SSB Phase Noise (dBC/Hz) Offset from Carrier	10Hz	-80
	100Hz	-110
	1KHz	-130
	10KHz	-140
	100KHz	-145

Notes: 1) Do not clean these Oscillators by Ultrasonic wave or Liquid
 2) For other Non-Standard specifications, contact a Brookdale Representative

Mechanical Dimensions

PIN	Function
1	NC
7	Gnd/ & Case Gnd
8	Output
14	+V _{CC}



Part Numbering Guide

BT1657CS 20.000MHz

Part Marketing Guide

Ordering P/N	Description	Part Marking										
BT1657CS - 20.000MHz	3.3V TCXO ±1.0 ppm over 0°C to +70°C	BTCS										
Date Code Format												
Year	1	2	3	4	5	6	7	8	9	0		
	A	B	C	D	E	F	G	H	J	K		
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	A	B	C	D	E	F	G	H	J	K	L	M

Mechanical and Environmental Specifications

Test	Reference Documents	Test Description
Temperature Cycle	MIL-STD-883, Mtd 1010, Cond. B	-55°C to + 25°C; Air to Air; 100 cycles; 10 min. dwell
Mechanical Shock	MIL-STD-883, Mtd 2002, Cond. B	1500g's
Vibration	MIL-STD-883, Mtd 2007, Cond. B	20-2000 Hz; 0.06 inch; 15 g's; 3 planes
Humidity Steady State	MIL-STD-202, Mtd 103	40°C; 90%-95% R.H.; 56 days
Thermal Shock	MIL-STD-883, Mtd 1011.7, Cond. B	100°C to 0°C; Water-to-Water; 15 cycles
Electrostatic Discharge	MIL-STD-883, Mtd 3015, Class II	2 KV to 4 KV Threshold
Solderability	MIL-STD-883, Mtd 2022.2	Solder dip; Meniscograph Criteria
Hermeticity	MIL-STD-883, Mtd 1014.8, Cond. A1	Mass spectro. 2 X 10 ⁻⁸ atmos. CC/sec He
Resistance to Soldering	MIL-STD-202, Mtd 210A, Cond. C	260°C; 10 seconds; 1 inch/sec.
Lead Integrity	MIL-STD-883, Mtd 2004.5, Cond. A, B1	Lead tension and bend stress
Marking Permanence	MIL-STD-883, Mtd 2015.8	Resistance to solvents
Life Test	MIL-STD-883, Mtd 1005.6	125°C, powered, 1000 hours minimum

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