ACS
Advanced Chamber Solutions

Quartz's Datasheet

Physical Property

Mechanical Properties

Density	(g/cm^3)	2.2
Mohs Hardness	--	6-7
Compressive Strength	(Mpa)	1100
Tensile Strength	(Mpa)	50
Bending Strength	(Mpa)	65
Torsional Strength	(Mpa)	30
Young's Modulus	(Mpa)	$7.5x10^4$
Poisson Ration	--	0.17

Thermal Properties

Thermal Expansion Coefficient	(20°C-320°C)	$5.5 \times 10^{-7} K^1$
Thermal Conductivity	(20°C)	$1.4\ W * m^{-1}k^{-1}$
Specific Heat	(20°C)	$670J * kg^{-1}k^{-1}$
Softening Point	(C°)	1630
Annealing Temperature	(C°)	1180
Strain Point	(C°)	1080

Electrical Properties

Resistivity	(20°C 1000°C)	$1x10^{20} * \Omega * m$ $1x10^{8} \Omega * m$
Dielectric Constant	(10GHz)	3.74
Dielectric Loss Factor	(10GHz)	0.0002
Dielectric Strength	--	$3.7x10^7\ V * m^{-1}$

Chemical Impurity

Typical Mean Value (ppm)

Type	Al	B	Ca	Co	Cu	Fe	K	LI	Mg	Mn	Na	NI	TI	OH
GE 124	14	<0.2	0.4	<0.01	0.05	0.2	0.6	0.6	0.1	<0.05	0.7	<0.1	1.1	<5
FLH211/311/310	22	0.2	1.5	0.1	0.01	1.5	2	2	0.3	0.5	2	0.1	2	~200
FLH321/320	14.2	0.08	0.5	--	<.05	0.23	0.25	0.44	<.05	<.05	0.12	<.05	1.3	~200
FLH321H/320H	8	0.04	0.6	--	<.05	0.15	0.07	0.15	<.05	<.05	0.08	<.05	1.4	~200
FLH611	22	0.2	1.5	0.1	0.01	1.5	2	2	0.3	0.5	2	0.1	2	<3
FLH621	14.2	0.08	0.5	--	<.05	0.23	0.25	0.44	<.05	<.05	0.12	<.05	1.3	<3
FLH621H	8	0.04	0.6	--	<.05	0.15	0.07	0.15	<.05	<.05	0.08	<.05	1.4	<3

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