AXTAL ADVANCED XTAL PRODUCTS

Specification	AXLGS635F	Issue: 02	Date: 2005-07-15

Type : Langasite (LGS) SMD Crystal Resonator Unit

Parameter	min.	typ.	max.	Unit	Condition
Frequency range	10		29	MHz	
Standard frequencies				MHz	
Crystal cut	Rotated Y				
Overtone	1				
Load capacitance C_L	See ordering code			pF	30 pF if not specified
Adjustment tolerance	-20		+20	ppm	@ 25°C
Frequency offset				ppm	
Frequency stability				ppm	Overall (Note 1)
vs. temperature in operation temperature range	-20 0		+52 +50	ppm °C	See chart on page 2
long term (aging rate)			5	ppm	
Resonance resistance R_r			15	Ω	
Motional capacitance C_1	40		150	fF	
Static capacitance C_0			7	pF	
Drive level		100		µW	
Drive level dependence (DLD)	According to				IEC 60444-6
Unwanted responses	$2*R_r$				$f_0 \sim f_0+500$ kHz
Insulation resistance	500			MΩ	100 V DC
Operable temperature range	-40		+85	°C	
Storage temperature range	-55		+125	°C	
Enclosure (see drawing)	SMD 6x3.5 (4-pad)				IEC 61837 DCC-4/06
Can height H	1,0			mm	
marking	Part no. Frequency Date Code				TBD
Packing	Tape & reel				IEC 60286-3

Notes:

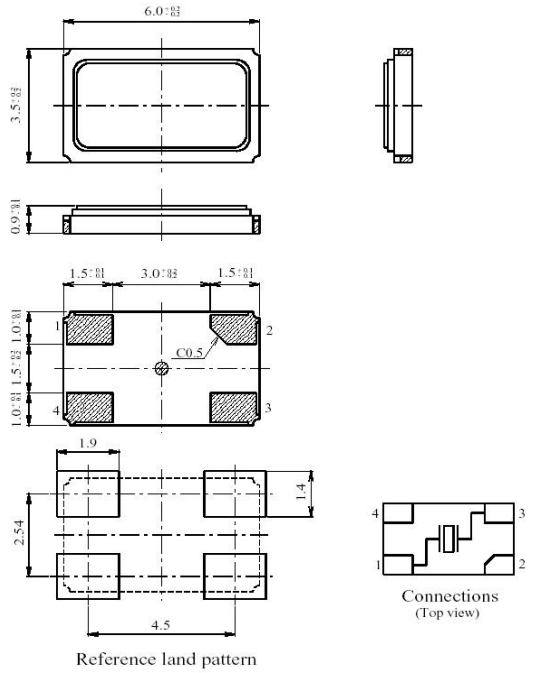
1. Overall frequency stability = initial tolerance + temp. stability + aging (1st year)
2. Terminology and test conditions are according to IEC standard IEC60122-1, unless otherwise stated
3. Measurement technique according to IEC 60444-5 or equivalent

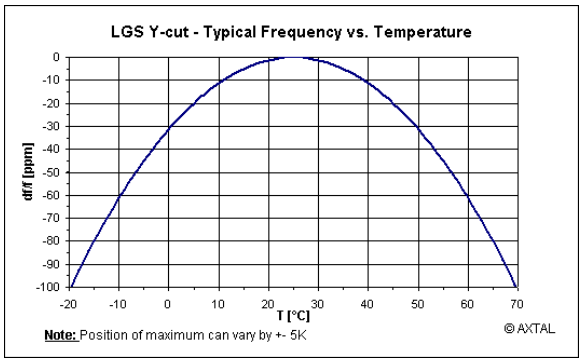
Ordering Code:

Model (Specification)	Load capacitance* [pF]	Frequency [MHz]
AXLGS635F	20	10.000

*Series resonance: "S"

Enclosure drawing





Environmental conditions

Test	IEC 60068 Part ...	IEC 60122-1 clause ...	Test conditions
Visual inspection, dimensions		4.5 4.6	Enclosure styles as in IEC 60122-3, if applicable
Sealing tests	2-17	4.8.2	Gross leak: Test Qc, Fine leak: Test Qk
Solderability Resistance to soldering heat	2-20	4.8.3	Test Ta (235 ± 5)°C Method 1 Test Tb Method 1A, 5s
Shock	2-27	4.8.8	Test Ea, 3 x per 2 axes **5000g, 0.3 ms half-sine**
Free fall	2-32	4.8.9	Test Ed procedure 1, 2 drops from 1m height
Vibration, sinusoidal	2-6	4.8.7	Test Fc, 1 octave per min. 1 hour per axes **10 Hz ~ 2000 Hz, 20g.**
Endurance tests - ageing - extended aging		 4.9.1 4.9.2	 30 days @ 85°C 1000h, 2000h, 8000h @85°C