

<b>Specification</b>	<b>AXLGS635F</b>	Issue: 02	Date: 2005-07-15
<b>Type : Langasite (LGS) SMD Crystal Resonator Unit</b>			

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	-20		+52	ppm	See chart on page 2
in operation temperature range	0		+50	°C	
long term (aging rate)			5	ppm	
Resonance resistance $R_r$			15	$\Omega$	
Motional capacitance $C_1$	40		150	fF	
Static capacitance $C_0$			7	pF	
Drive level		100		$\mu$ W	
Drive level dependence (DLD)	According to				IEC 60444-6
Unwanted responses	$2 \cdot R_r$				$f_0 \sim f_0 + 500$ kHz
Insulation resistance	500			M $\Omega$	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:**

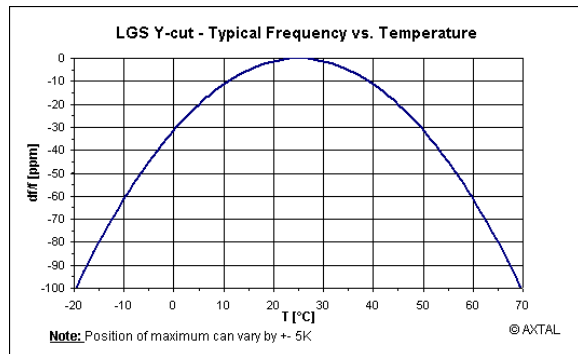
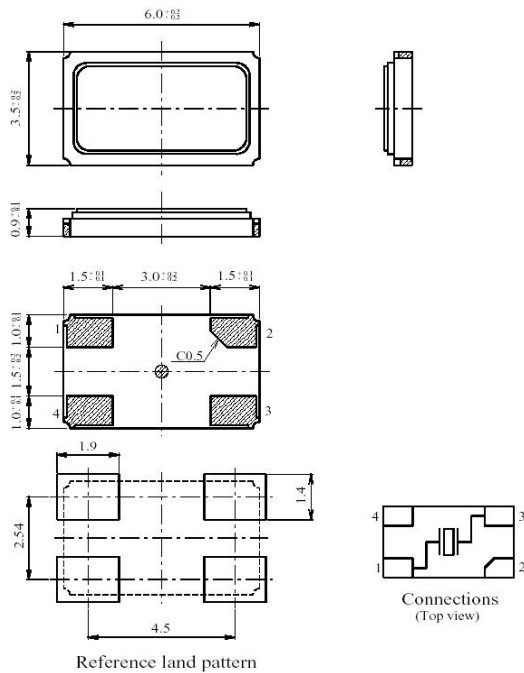
- Overall frequency stability = initial tolerance + temp. stability + aging (1<sup>st</sup> year)
- Terminology and test conditions are according to IEC standard IEC60122-1, unless otherwise stated
- Measurement technique according to IEC 60444-5 or equivalent

**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 <b>5000g, 0.3 ms half-sine</b>
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 <b>10 Hz ~ 2000 Hz, 20g.</b>
Endurance tests			
- ageing		4.9.1	30 days @ 85°C
- extended aging		4.9.2	1000h, 2000h, 8000h @85°C