CRYSTAL UNIT



ATS SMD TYPE

- ATS SMD type package
- AT or BT cut available
- Resistance weld seal
- Tape and reel available
- Tight tolerance / stability
- Pb-free and RoHS compliance

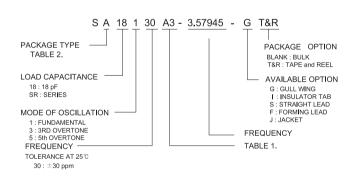
■ ELECTRICAL SPECIFICATIONS

Frequency Range	3.2768 to 85.000MHz
Operating Temperature Range	-10 to +60 ℃(STD), -20 to +70 ℃, or specify
Storage Temperature Range	-40 to +85℃
Frequency Tolerance (at 25 ℃)	\pm 15, \pm 30, \pm 50ppm(STD), or specify
Frequency stability	See Table1 in page 4
Over Operating Temperature Range	\pm 30, \pm 50(STD), \pm 100ppm
Load Capacitance(CL)	18pF(STD), Custom CL≥10pF or Series Resonant
Drive Level	100 ℓ ^M (1000 ℓ ^M max.)
Shunt Capacitance(Co)	7.0pF max.
Aging (at 25℃)	\pm 5.0ppm/year max.
Insulation Resistance	500MΩ min. at 100V bc

■ EQUIPVALENT SERIES RESISTANCE(ESR)

Frequency Range(MHz)	ESR(Ω MAX.)	Mode of Oscillation
3.2768 ~ 3.999	150	Fundamental / AT
4.000 ~ 4.999	120	Fundamental / AT
5.000 ~ 5.999	100	Fundamental / AT
6.000 ~ 7.999	90	Fundamental / AT
8.000 ~ 9.999	70	Fundamental / AT
10.000 ~ 11.999	60	Fundamental / AT
12.000 ~ 14.999	50	Fundamental / AT
15.000 ~ 19.999	40	Fundamental / AT
20.000 ~ 27.000	30	Fundamental / AT
27.000 ~ 32.999	50	Fundamental / BT
33.000 ~ 40.000	40	Fundamental / BT
24.576 ~ 47.999	80	3rd Overtone
48.000 ~ 85.000	60	3rd Overtone

■ PART NUMBERING GUIDE



■ TABLE 1.

FREQUENCY STABILITY VS. TEMPERATURE RANGE											
Stability		±5	±7.5	±10	±15	±20	±30	±50	±100		
Temp	1	2	3	4	5	6	7	8			
-10 ~ 60℃	Α	*	*	*	*	*	*	*	*		
-20 ~ 60℃	В		*	*	*	*	*	*	*		
0 ~ 70℃	С		*	*	*	*	*	*	*		
-10 ~ 70℃	D		*	*	*	*	*	*	*		
-20 ~ 70℃	Е			*	*	*	*	*	*		
-30 ~ 60℃	-30 ~ 60°C F			*	*	*	*	*	*		
-20 ~ 85℃	G				*	*	*	*	*		
-30 ~ 70℃	Н				*	*	*	*	*		
-30 ~ 85℃	1					*	*	*	*		
-40 ~ 85℃	J					*	*	*	*		
-40 ~ 90°C	K						*	*	*		
-40 ~ 105℃	L						*	*	*		

■ TABLE 2.

Α	В	С	D	E	F	G	Н	J	K	L	М	N	0	Р	Q
HC-49/U	HC-49/T	ATS-25/U	ATS-49/U	ATS-51/U	UM-1	UM-4	UM-5	SX-1	SX-3	SX-5	SX-7	SX-6	SX-8	SX-32	SX-22

■ MECHANICAL DIMENSIONS

