

# UM TYPE UM-1

- UM type package
- AT cut available
- Tight tolerance / stability
- Wide temperature range
- Frequencies to 200.000 MHz available
- Pb-free and RoHS compliance



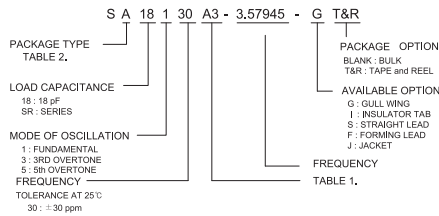
## ELECTRICAL SPECIFICATIONS

Frequency Range	7.000 to 200.000MHZ
Operating Temperature Range	-10 to +60 °C (STD), -20 to +70 °C, or specify
Storage Temperature Range	-40 to +85 °C
Frequency Tolerance (at 25 °C)	±10, ±15, ±20(STD), ±30, ±50ppm, or specify
Frequency stability Over Operating Temperature Range	See Table1 in page 4 ±10, ±15, ±20(STD), ±30, ±50ppm
Load Capacitance(CL)	18pF(STD), Custom CL ≥10pF or Series Resonant
Drive Level	100µW(1000µW max.)
Shunt Capacitance(Co)	7.0pF max.
Aging (at 25 °C)	±3.0ppm/year max.
Insulation Resistance	500MΩ min. at 100Vdc

## EQUIVALENT SERIES RESISTANCE(ESR)

Frequency Range(MHz)	ESR(Ω MAX.)	Mode of Oscillation
7.000 ~ 9.999	80	Fundamental
10.000 ~ 15.999	60	Fundamental
16.000 ~ 60.000	30	Fundamental
30.000 ~ 79.999	80	3rd Overtone
80.000 ~ 150.000	80	3rd Overtone
80.000 ~ 200.000	100	5th Overtone

## PART NUMBERING GUIDE



## TABLE 1.

Temp	Stability	±5	±7.5	±10	±15	±20	±30	±50	±100
		1	2	3	4	5	6	7	8
-10 ~ 60 °C	A	*	*	*	*	*	*	*	*
-20 ~ 60 °C	B	*	*	*	*	*	*	*	*
0 ~ 70 °C	C	*	*	*	*	*	*	*	*
-10 ~ 70 °C	D	*	*	*	*	*	*	*	*
-20 ~ 70 °C	E	*	*	*	*	*	*	*	*
-30 ~ 60 °C	F	*	*	*	*	*	*	*	*
-20 ~ 85 °C	G	*	*	*	*	*	*	*	*
-30 ~ 70 °C	H	*	*	*	*	*	*	*	*
-30 ~ 85 °C	I	*	*	*	*	*	*	*	*
-40 ~ 85 °C	J	*	*	*	*	*	*	*	*
-40 ~ 90 °C	K	*	*	*	*	*	*	*	*
-40 ~ 105 °C	L	*	*	*	*	*	*	*	*

## TABLE 2.

A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	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-8	SX-8	SX-32	SX-22

## MECHANICAL DIMENSIONS

(mm)

