

Quartz Crystal Series	Features ◆RoHS Compliant ◆3.0*9.0mm cylinder type	
AT-3*9(A39B)		

Electrical Specifications

Item	Specifications		Remarks
Series	AT-3*9		
Nominal Frequency Range	3.579545MHz to 40.0MHz		Fund.;AT Cut
	30.0MHz to 90.0MHz		3 rd Overtone;AT Cut
Frequency Tolerance	±20ppm(Standard)		Others are offered
Operating Temperature Range	-20℃ to +70℃	-40℃ to +85℃	
Storage Temperature Range	-55℃ to +125℃		
Series Resistance	As ESR table		
Shunt Capacitance	5.0pF Max.		
Load Capacitance	20pF(Standard)		7pF to ∞
Drive Level	100μW		500μW Max.
Insulated Resistance	500MΩ		Minimum at 100Vdc
Aging	±3ppm/year		Maximum

ESR(Series Resistance)

Frequency(KHz)	Mode	Ω Max	Frequency(KHz)	Mode	Ω Max
3.579545~3.999	Fund.;AT	150	10.000~13.999	Fund.;AT	50
4.000~5.999	Fund.;AT	120	14.000~40.000	Fund.;AT	40
6.000~9.999	Fund.;AT	70	30.000~90.000	3 rd O.T.;AT	100

Stability vs. Temperature

◆ Standard		1	2	3	5	6	7	Remarks
◇ Please specify		±10ppm	±20ppm	±30ppm	±50ppm	±15ppm	±25ppm	
C	-20℃ to +70℃	◇	◆	◇	◇	◇	◇	Standard
D	-40℃ to +85℃			◇	◆			

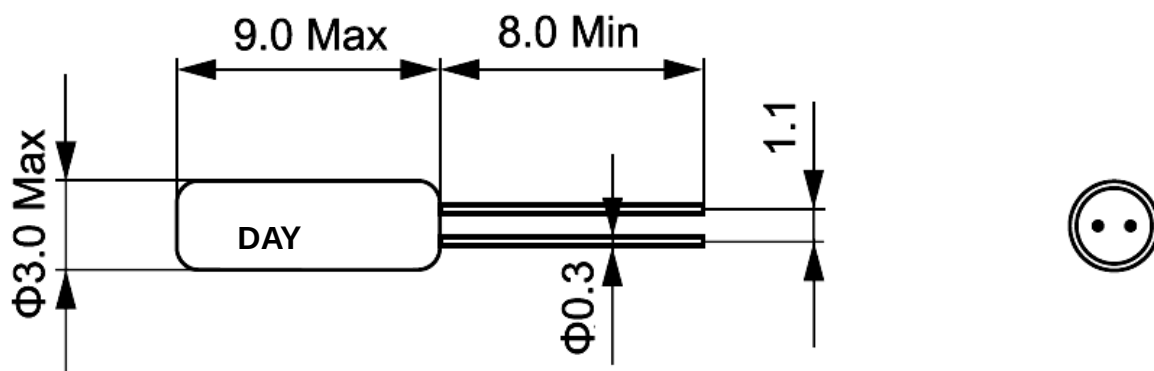
Ordering Information

Q	R	Type	Pin	XX.XXXX	M	Mode	CL pF	Freq.Tolerance at 25℃	Operating Temp.	Stability Vs.Temp.	Option
Q:Quartz R:Resonator	A39: 3.0*9.0mm	B: 2Pins	Center frequency 3.57 to 90.0MHz	M: MHz	F:Fund.;AT O:3 rd O.T.	See Table	±10ppm to ±50ppm	See Table	See Table	F:Lead Free T:T&R Blank:Bulk	
Example:QRA39B04.0000MFK2C2F (Crystal,AT-3*9,4.000MHz,2pins,20pF,+/-20ppm,-20 to +70deg,+/-20ppm,Lead free,Bulk)											

Quartz Crystal Series

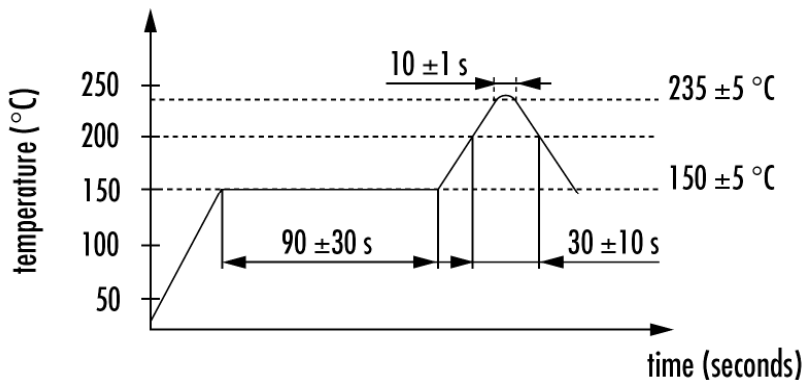
AT-3*9

Dimensions



UNIT:mm

Reflow Soldering Profile



Load Capacitance Codes

7pF:	E	8pF:	F	9pF:	B	10pF:	R
12pF:	T	15pF:	H	16pF:	I	18pF:	J
20pF:	K	22pF:	L	25pF:	G	27pF:	M
30pF:	N	32pF:	P	33pF:	W	Series:	S