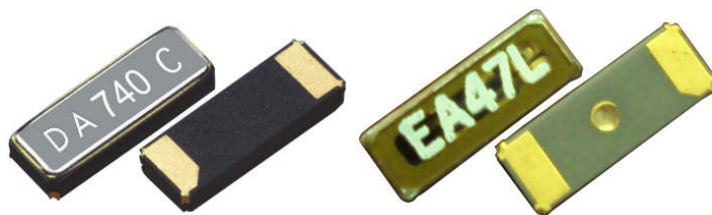


## Quartz Crystal Series

**SMD4918A**  
**SMD4115A**

### Features

- ◆ RoHS Compliant
- ◆ Ceramic



## Electrical Specifications

| Item                        | Specifications                  |          | Remarks            |
|-----------------------------|---------------------------------|----------|--------------------|
| Series                      | SMD4918A                        | SMD4115A |                    |
| Nominal Frequency Range     | 32.768KHz                       |          | Standard           |
|                             | 30KHz to 150KHz                 |          | Available          |
| Frequency Tolerance         | ±20ppm(Standard)                |          | Others are offered |
| Temperature Coefficient     | -0.034±0.006ppm/°C <sup>2</sup> |          |                    |
| Turn Over Temperature       | 25°C±5°C                        |          |                    |
| Operating Temperature Range | -20°C to +70°C; -40°C to +85°C  |          |                    |
| Storage Temperature Range   | -55°C to +125°C                 |          |                    |
| Series Resistance           | 65KΩ                            |          | 32.768KHz          |
| Shunt Capacitance           | 1.5pF                           |          | Typical            |
| Capacitance Ratio           | 518                             |          | Typical            |
| Load Capacitance            | 12.5pF(Standard)                |          | 6pF to 12.5pF      |
| Drive Level                 | 0.5μW                           |          | Maximum            |
| Insulated Resistance        | 500MΩ                           |          | Minimum at 100Vdc  |
| Aging                       | ±2ppm/year                      |          | Maximum            |

## ESR(Series Resistance)

| Frequency(KHz) | Mode | K Ω Max | Frequency(KHz) | Mode | K Ω Max |
|----------------|------|---------|----------------|------|---------|
| 30.0~40.0      | Fund | 65      | 100.1~120.0    | Fund | 40      |
| 40.1~60.0      | Fund | 55      | 120.1~150.0    | Fund | 30      |
| 60.1~100.0     | Fund | 50      |                |      |         |

## Stability vs. Temperature

| ◆ Standard       |                | 1      | 2      | 3      | 5      | 8      | 7       | Remarks  |
|------------------|----------------|--------|--------|--------|--------|--------|---------|----------|
| ◇ Please specify |                | ±10ppm | ±20ppm | ±30ppm | ±50ppm | ±80ppm | ±160ppm |          |
| C                | -20°C to +70°C | ◇      | ◆      | ◇      | ◇      | ◇      | ◇       | Standard |
| D                | -40°C to +85°C |        | ◇      | ◇      | ◆      | ◇      | ◇       |          |

## Ordering Information

| Q | R | Type | XX.XXXX | K | Mode | CL pF | Freq.Tolerance at 25°C | Operating Temp. | Stability Vs.Temp. | Option |
|---|---|------|---------|---|------|-------|------------------------|-----------------|--------------------|--------|
|---|---|------|---------|---|------|-------|------------------------|-----------------|--------------------|--------|

Q:Quartz 48A: SMD4918A Center frequency 30 to 150KHz K: KHz F:Fund.;AT See Table ±20ppm to ±50ppm See Table See Table F:Lead Free T:T&R Blank:Bulk

**Example:QR48A32.7680KFS2C2F** (Crystal,SMD4918A,32.768KHz,12.5pF,+/-20ppm,-20 to +70deg,+/-20ppm.T&R,Lead free)

Quartz Crystal Series

SMD4918A

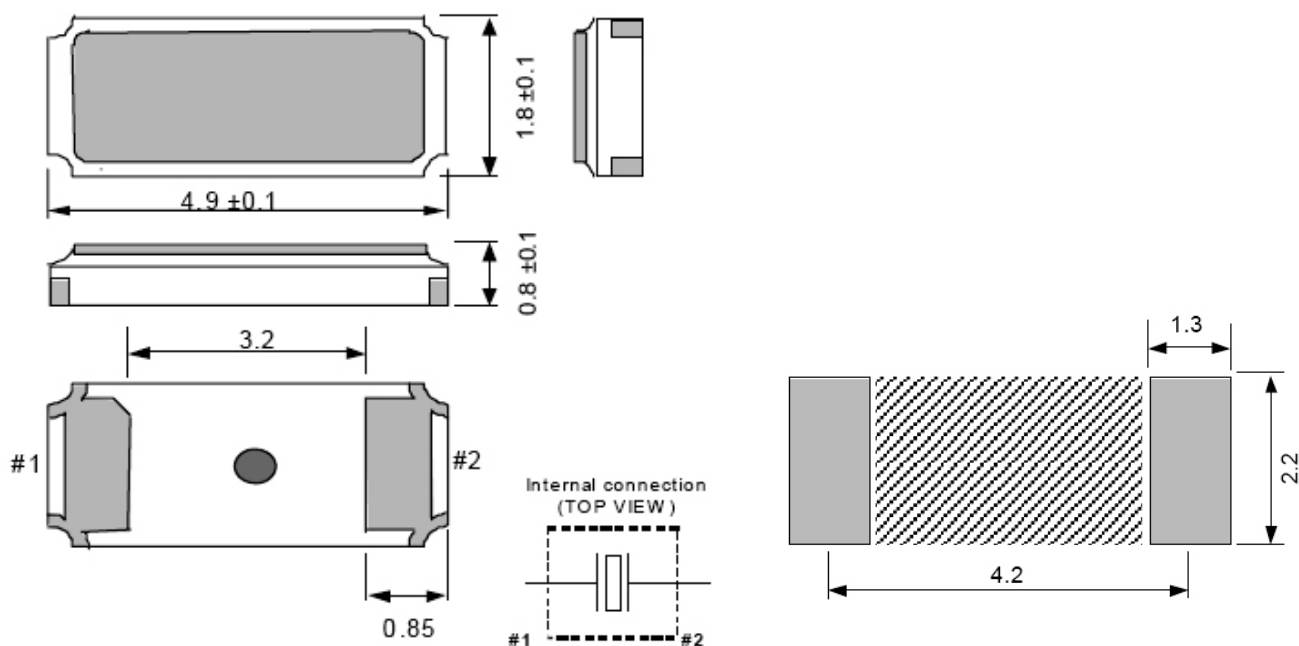
SMD4115A

Load Capacitance Codes

|       |   |       |   |         |   |      |   |
|-------|---|-------|---|---------|---|------|---|
| 6pF:  | A | 7pF:  | E | 8pF:    | F | 9pF: | B |
| 10pF: | R | 12pF: | T | 12.5pF: | S |      |   |

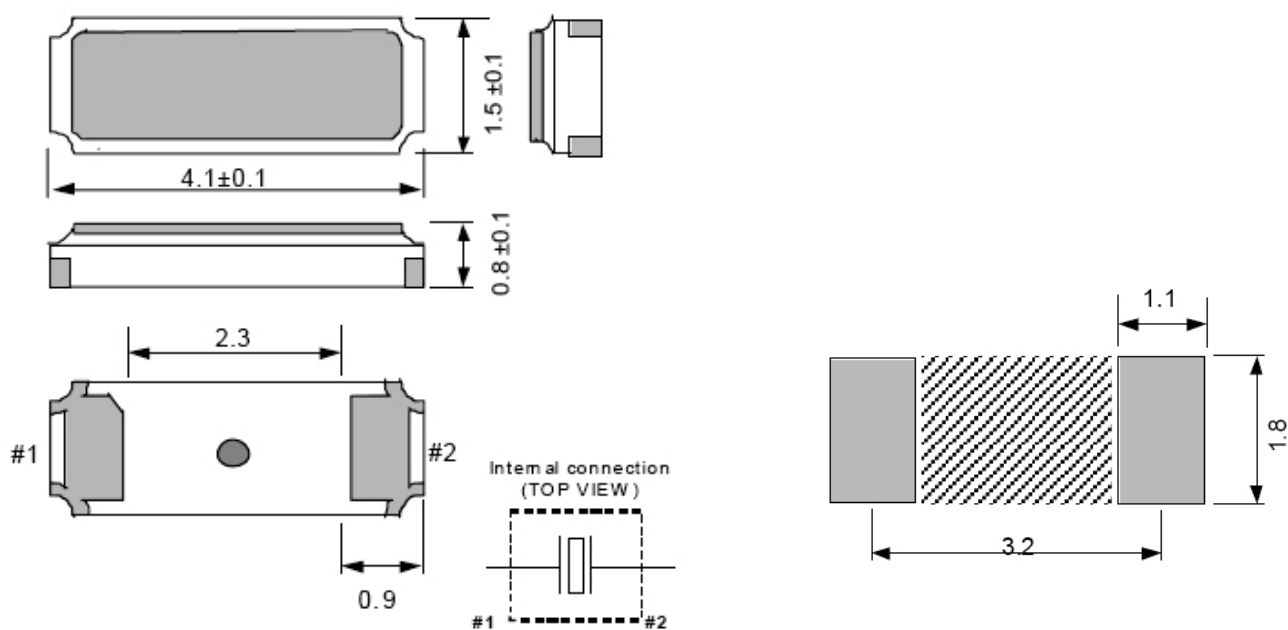
Dimensions

SMD4918A



UNIT:mm

SMD4115A



UNIT:mm

Quartz Crystal Series

SMD4918A

SMD4115A

**Reflow Soldering Profile**

