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**General Information**

|                          |                                                         |
|--------------------------|---------------------------------------------------------|
| Series                   | SMD Auto X7R FF                                         |
| Style                    | SMD Chip                                                |
| Description              | SMD, MLCC, FF-CAP, Floating Electrode, Automotive Grade |
| Features                 | FF-CAP, Floating Electrode, Automotive Grade            |
| RoHS                     | Yes                                                     |
| Termination              | Flexible Termination                                    |
| Marking                  | No                                                      |
| Qualifications           | AEC-Q200                                                |
| Typical Component Weight | 185 mg                                                  |
| Shelf Life               | 78 Weeks                                                |
| MSL                      | 1                                                       |

**Dimensions**

|                      |                 |
|----------------------|-----------------|
| L                    | 4.5mm +/-0.4mm  |
| W                    | 3.2mm +/-0.3mm  |
| T                    | 1.6mm +/-0.2mm  |
| S                    | 2.3mm MIN       |
| B                    | 0.7mm +/-0.35mm |
| Case Code (EIA / mm) | 1812 / 4532     |

**Packaging Specifications**

|                    |                          |
|--------------------|--------------------------|
| Packaging          | T&R, 180mm, Plastic Tape |
| Packaging Quantity | 1000                     |

**Specifications**

|                                                                    |                                                 |
|--------------------------------------------------------------------|-------------------------------------------------|
| Capacitance                                                        | 0.33 uF                                         |
| Measurement Condition                                              | 1 kHz 1.0Vrms                                   |
| Tolerance                                                          | 5%                                              |
| Voltage DC                                                         | 50 VDC                                          |
| Dielectric Withstanding Voltage                                    | 125 VDC                                         |
| Temperature Range                                                  | -55/+125°C                                      |
| Temp. Coefficient                                                  | X7R                                             |
| Capacitance Change with Reference to +25°C and 0 VDC Applied (TCC) | 15%                                             |
| Dissipation Factor                                                 | 2.5% 1 kHz 1.0Vrms                              |
| Aging Rate                                                         | 3% Loss/Decade Hour: Referee Time is 1000 Hours |
| Insulation Resistance                                              | 3.0303 GOhms                                    |

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