GENERAL DESCRIPTION
Passive Micro Component group is pleased to introduce the UBR Series of next generation of surface mount Ultra-Broadband Resistors. This product was designed utilizing our proprietary Glass Sandwich Flexiterm® Technology, (GSFT). The Flexiterm® is a surface mountable automotive qualified termination that adds an extra margin against damage due to flexture during installation. The UBR Series has been designed with high quality selected materials that yield excellent performance. This product is ideal for use in Optical Transceiver Modules or any application requiring excellent ultra-broadband performance. The use of glass sandwich technology and precision laser trimming reduces parasitic noise up to 40 GHz.

FEATURES
• Frequency Range: DC to 40 GHz
• EIA 0402 Case Size
• Power Rating: 125 mW
• Operating Temperature: -40°C to +125°C
• 100% Laser Trimming for Tight Tolerances
• RoHS Compliant

APPLICATIONS
• Optical Transceiver Modules
• Broadband Receiver
• TOSA / ROSA
• Wideband Test Equipment
• Low Noise Amplifier
• MMIC Amplifiers

MARKETS
• Opto-electronics
• Automotive
• Telecom
• Broadband Jamming for EW
• Satellite Communication

HOW TO ORDER
Series Code
UBR = Ultra-Broadband Resistor
Case Size
0402
TCR (ppm/°C)
A = ±250
B = ±100
C = ±50*
D = ±25*
E = Special Request Please supply design or contact factory
*Non-standard values per special request
Resistance
First two Significants for Resistance R for decimal point

Packaging
TR = 7
Termination Type
Z = Flexiterm®
(Ag/Epoxy)
NiSn plated
7 = Gold Termination*
*Non-standard termination per special request
Capacitance Tolerance
D = ±0.5%
F = ±1%
G = ± 2%
S = Special Request Please supply design or contact factory
*Non-Standard tolerance values per special request

For RoHS compliant products, please select correct termination style

The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer by reference and should be reviewed in full before placing any order.
UBR Series
Ultra-Broadband Resistors

**MECHANICAL DIMENSIONS**

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>0402</td>
<td>0.0213</td>
<td>0.0125</td>
<td>0.0206</td>
<td>0.0436</td>
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**0402 SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Resistor</th>
<th>Detail</th>
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<tbody>
<tr>
<td>Outline</td>
<td>EIA 0402</td>
</tr>
<tr>
<td>Package</td>
<td>Glass wafer sandwich</td>
</tr>
<tr>
<td>Maximum Voltage</td>
<td>1 KV</td>
</tr>
<tr>
<td>Resistance Value Range</td>
<td>From 16.6 Ohms to 200 Ohms</td>
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<tr>
<td>Termination</td>
<td>FLEXITERM® (Ag/Epoxy), plated</td>
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<tr>
<td>Power Rating</td>
<td>125 mW</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40°C to +125°C</td>
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<tr>
<td>Tolerances</td>
<td>0.5%, 1%, 2%, 5%</td>
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</tbody>
</table>

**SUGGESTED MOUNTING PAD DIMENSIONS**

W = Chip Width  L = Chip Length  T = Chip Thickness

**NOTES:**
Mounting will allow the solder fillet to travel up approximately 0.015" of the chip's end and side termination surface. Heavier fillets require a predeposition of solder paste and or an increase in pad dimensions. Typical solder paste application is a .008" to 0.01" thickness with >50% of volume in solder alloy. Can be mounted in both vertical and horizontal orientation without changing electrical performance.

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051021

-- PASSIVE MICRO COMPONENTS --
**POWER DERATING**

![Power Derating Curve](image)

**INTERNAL IMPEDANCE CURVES**

![Internal Impedance Curves](image)

**ENVIRONMENTAL TEST**

<table>
<thead>
<tr>
<th>Test</th>
<th>Limits</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Test/Stability</td>
<td>±0.25% Max Δ R/R</td>
<td>MIL-STD-202 MTD 108, 1000hrs, 125°C, 50mW</td>
</tr>
<tr>
<td>Thermal Shock</td>
<td>±0.25% Max Δ R/R</td>
<td>MIL-STD-202 MTD 107</td>
</tr>
<tr>
<td>High Temperature Exposure</td>
<td>±0.25% Max Δ R/R</td>
<td>100 Hrs @ 150°C</td>
</tr>
<tr>
<td>Moisture Resistance</td>
<td>±0.25% Max Δ R/R</td>
<td>MIL-STD-202 MTD 106</td>
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