UBR Series Ultra-Broadband Resistors





GENERAL DESCRIPTION

AVX 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 triming reduces parasitic noise up to 40 GHz.

Mixers

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Directional Couplers

and Combiners

• Ultra-Broadband Splitters

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



UBR 0402 Series Code	A	500	E	z	Packaging TR = 7 Termination Type Z = Flexiterm [®] (Ag/Epoxy) NiSn plated 7 = Gold Termination* *Non-standard termination per special request
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					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



061021

UBR Series Ultra-Broadband Resistors



Detail

EIA 0402

Glass wafer sandwich

1 K V

From 16.6 Ohms to 200 Ohms

FLEXITERM[®] (Ag/Epoxy), plated

125 mW -40°C to +125°C

0.5%, 1%, 2%, 5%

MECHANICAL DIMENSIONS

mm (inches)



Resistor

Outline

Package

Maximum Voltage

Resistance Value Range

Termination

Power Rating

Operating Temperature Range

∱w IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Length (L)	1.00±0.10 (0.039±0.004)
	Width (W)	0.50±0.10 (0.020±0.004)
↓ ↓	Thickness (T)	0.50±0.10 (0.020±0.004)
т	Terminal (t)	0.25±0.15 (0.010±0.006)

MECHANICAL DIMENSIONS

mm (inches)



Length	0.60±0.050
-	
(L)	(0.024±0.010)
Width	0.325±0.050
(W)	(0.024±0.010)
(W)	(0.024±0.010)
Thickness	0.325±0.050
(T)	(0.020±0.004)
(1)	(0.02010.004)
Terminal	0.150±0.050
(t)	(0.006±0.010)
(9)	(0.000±0.010)

Tolerances 0201 SPECIFICATIONS

Resistor	Detail
Outline	EIA 0201
Package	Glass wafer sandwich
Maximum Voltage	1 KV
Resistance Value Range	From 16.6 Ohms to 200 Ohms
Termination	FLEXITERM® (Ag/Epoxy), plated
Power Rating	125 mW
Operating Temperature Range	-40°C to +125°C
Tolerances	0.5%, 1%, 2%, 5%

SUGGESTED MOUNTING PAD DIMENSIONS



Normal Pads

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

Case Size	A Min.	B Min.	C Min.	D Min.
0201	0.0256	0.0075	0.0130	0.0268
0402	0.0213	0.0125	0.0206	0.0436

Dimensions are in inches.

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





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.

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POWER DERATING



INTERNAL IMPEDANCE CURVES

Tested 0402 UBR Internal Impedance Curves



ENVIRONMENTAL TEST

Test	Limits	Specification	
Life Test/Stability	$\pm 0.25\%$ Max Δ R/R	MIL-STD-202 MTD 108, 1000hrs, 125°C, 50mW	
Thermal Shock	±0.25% Max Δ R/R	MIL-STD-202 MTD 107	
High Temperature Exposure	±0.25% Max ∆ R/R	100 Hrs @ 150°C	
Moisture Resistance	±0.25% Max Δ R/R	MIL-STD-202 MTD 106	



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