

# Series FBX / FEX / FSX

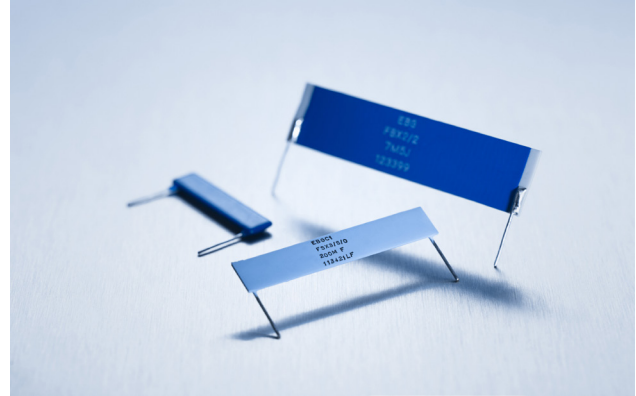
TC of  $\pm 80$  ppm/ $^{\circ}$ C combined with precision tolerances and wide ohmic range

A Miba Group Company

Low-cost, high-voltage resistors that provide high-density packaging in large volume applications.

## Features

- up to 32 kV operating voltage
- Non-Inductive design
- ROHS compliant
- Standard contact lead diameter 0.6 mm. Others available on special request or no lead version for SMD mounting
- On request custom designed version available, max. ceramic size substrates 101.6 mm (4 inch)
- Voltages up to 35% higher than the values listed – "S"-Version



## Technical Specifications

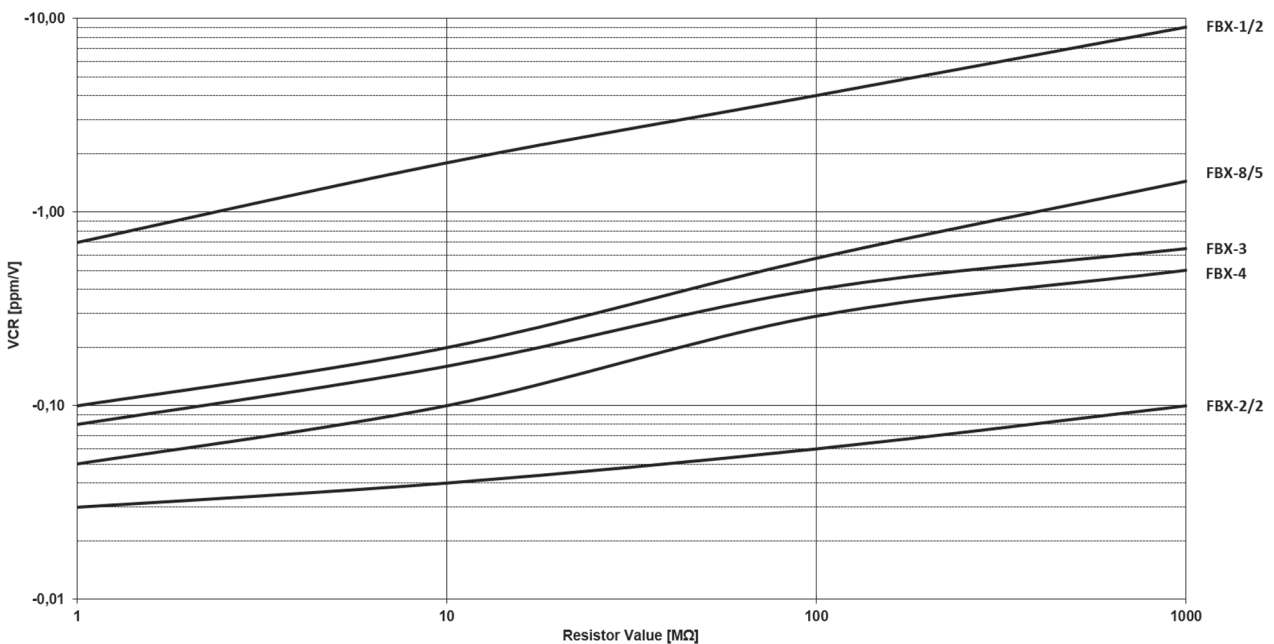
<b>Resistance value</b>	$200 \Omega \leq 2 \text{ G}\Omega$ higher values on special request
<b>Resistance tolerance</b>	$\pm 0.5 \%$ to $\pm 10 \%$ down to $\pm 0.1 \%$ on special request for limited ohmic values
<b>Temperature coefficient</b>	$\leq 100 \text{ M}\Omega$ : $\pm 80 \text{ ppm}/^{\circ}\text{C}$ standard $> 100 \text{ M}\Omega$ : $\pm 150 \text{ ppm}/^{\circ}\text{C}$ standard from $-5^{\circ}\text{C}$ to $+105^{\circ}\text{C}$ referenced to $+25^{\circ}\text{C}$ ; down to $15 \text{ ppm}/^{\circ}\text{C}$ on special request for limited ohmic value
<b>Max. operating temperature</b>	FBX/FSX: $-55^{\circ}\text{C}$ to $+225^{\circ}\text{C}$ FEX: $0^{\circ}\text{C}$ to $+175^{\circ}\text{C}$
<b>Voltage coefficient</b>	see VCR-chart below, for FBX-6/5 ask for details
<b>Weight</b>	depending on model no. (ask for details)

### Different coatings available:

- **Series FBX:** with surface silicone print as an inexpensive alternative
- **Series FEX:** with epoxy coating for maximum moisture protection
- **Series FSX:** silicone conformal for high-temperature operations ( $225^{\circ}\text{C}$ )

**Other coating options such as glass, 2xpolyimide, UV cured, on special request**

## Typical Voltage Coefficient for FBX series (in ppm per volt)



### Example:

FBX-2/2 with 100 MΩ has a typical voltage coefficient of -0.06 ppm/V.

# Series FBX / FEX / FSX



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## Model Specifications

### Series FBX with Surface Silicone Print

Model no.	Wattage at +25°C	Max. continuous operating voltage	Dimensions in millimeters (inches)		
			A ±0.50 (max.) ±0.02	B ±0.50 (max.) ±0.02	C ±0.50 ±0.02
FBX 1/2	0.50	3,000*	12.90 (0.51)	3.40 (0.13)	10.20 (0.40)
FBX 5/5	0.65	4,500*	17.15 (0.68)	3.40 (0.13)	15.24 (0.60)
FBX 6/5	1.20	5,000*	20.00 (0.98)	5.08 (0.20)	17.78 (0.70)
FBX 8/5	1.60	6,000*	25.60 (1.01)	5.30 (0.21)	22.90 (0.90)
FBX 3	3.00	9,000*	38.30 (1.51)	6.60 (0.26)	35.50 (1.40)
FBX 4	4.00	11,500*	51.00 (2.01)	6.60 (0.26)	48.20 (1.90)
FBX 2/2	5.00	16,500*	51.00 (2.01)	12.90 (0.51)	48.20 (1.90)

\*when used in clean air

### Series FEX with Epoxy Protection

Model no.	Wattage at +25°C	Max. continuous operating voltage	Dimensions in millimeters (inches)		
			A ±1.00 (max.) ±0.04	B ±1.00 (max.) ±0.04	C ±0.50 ±0.02
FEX 1/4	0.25	4,000	13.80 (0.54)	5.00 (0.20)	10.20 (0.40)
FEX 5/5	0.35	7,000	19.05 (0.75)	5.08 (0.20)	15.24 (0.60)
FEX 4/5	0.80	9,000	26.10 (1.03)	6.70 (0.26)	22.90 (0.90)
FEX 3/2	1.50	13,000	38.90 (1.53)	7.90 (0.31)	35.50 (1.40)
FEX 2	2.00	17,000	51.50 (2.03)	8.10 (0.32)	48.20 (1.90)
FEX 2/2	3.00	24,000	51.50 (2.03)	14.40 (0.57)	48.20 (1.90)

### Series FSX with Conformal Silicone Protection

FSX 1/2	0.50	4,000	13.60 (0.54)	4.50 (0.18)	10.20 (0.40)
FSX 5/5	0.65	6,000	17.85 (0.70)	4.50 (0.18)	15.24 (0.60)
FSX 8/5	1.60	8,000	25.90 (1.02)	6.30 (0.25)	22.90 (0.90)
FSX 3	3.00	12,000	38.70 (1.52)	7.50 (0.30)	35.50 (1.40)
FSX 4	4.00	15,000	51.30 (2.02)	7.50 (0.30)	48.20 (1.90)
FSX 2/2	5.00	22,000	51.30 (2.02)	14.20 (0.56)	48.20 (1.90)

## How to make an order

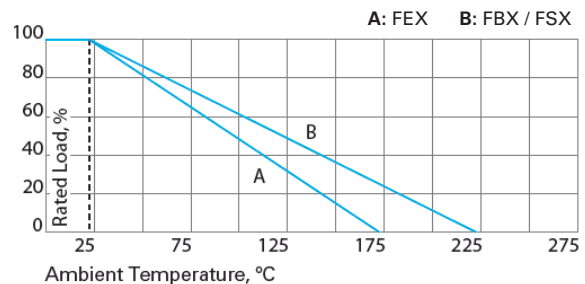
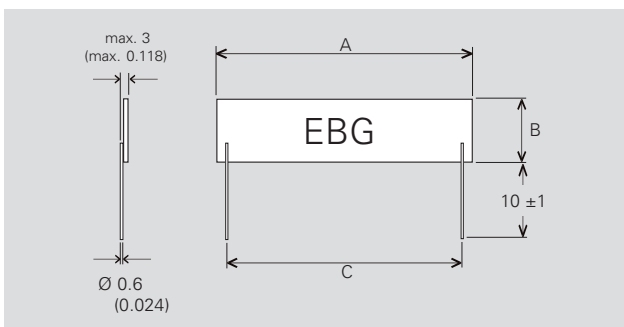
Model no.\_Ohmic value\_Tolerance

For example:

FBX 1/2 1M 5% or FSX 8/5 200M 1%

Example for higher voltage:

FSX-3-S 470M 5% or FBX-1/2-S 50M 1%



The above spec. sheet features our standard products. For further options please contact our local EBG representative or contact us directly.