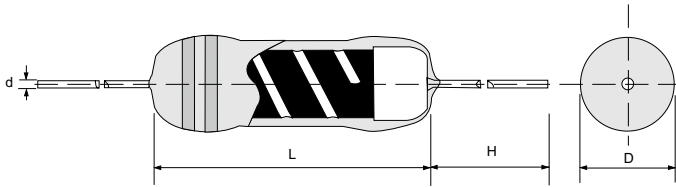


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## Specifications Per

• IEC 60115-1, IEC 60115-4

## Features

- Flameproof multi-layer coating equivalent to UL 94 V-0
- Flameproof feature equivalent to overload test UL 1412
- Color code per MIL & EIA standards
- Special tin-plated electrolytic copper lead wire
- Products meet RoHS requirements and do not contain substances of very high concern identified by European Chemicals Agency

## ■ DIMENSIONS

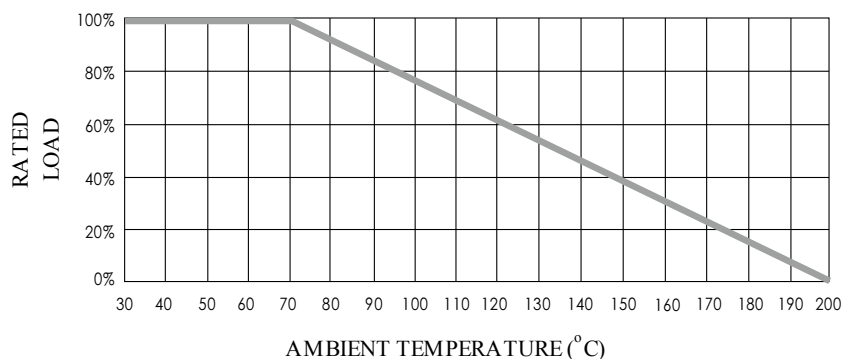
Type	Body Length (L, mm)	Body Diameter (D, mm)	Lead Wire Length (H, mm)	Lead Wire Diameter (d, mm)	Net Weight Per 1000Pcs
FGE50	9.00 ± 1.0	3.2 ± 0.2	28 ± 3.0	0.6 ± 0.03	340 Grams
FGE101	9.00 ± 1.0	3.2 ± 0.2	28 ± 3.0	0.6 ± 0.03	340 Grams
FGE100	11.0 ± 1.0	4.0 ± 0.5	28 ± 3.0	0.7 ± 0.03	500 grams
FGE201	11.0 ± 1.0	4.0 ± 0.5	28 ± 3.0	0.8 ± 0.03	510 grams
FGE200	11.0 ± 1.0	4.5 ± 0.5	28 ± 3.0	0.8 ± 0.03	500 grams
FGE301	13.5 ± 1.0	5.0 ± 0.5	30 ± 3.0	0.8 ± 0.03	1050 grams

## ■ GENERAL SPECIFICATIONS

Type	Power Rating (at 70°C)	Maximum Working Voltage	Maximum Overload Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
FGE50	1/2W	300V	600V	2.2Ω	10KΩ	±5%	E-24
FGE101	1W	300V	600V	2.2Ω	10KΩ	±5%	E-24
FGE100	1W	350V	600V	2.2Ω	10KΩ	±5%	E-24
FGE201	2W	350V	600V	2.2Ω	10KΩ	±5%	E-24
FGE200	2W	350V	600V	2.2Ω	10KΩ	±5%	E-24
FGE301	3W	350V	700V	2.2Ω	10KΩ	±5%	E-24

\* Please contact us for 3W type (FGE301), resistance values, sizes, or specifications not listed.

## ■ POWER DERATING CURVE



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### ■ PART NUMBER

Example: FGE101J10K0TKZTB2K0

FGE101	J	10K0	TKZ	TB2K0
Type	Tolerance	Resistance	TCR	Packaging
	J (5%)	10KΩ <b>4-character code</b> containing - 3 significant digits 1 letter multiplier  <u>OHM MULTIPLIER</u> R = 1 K = 10 <sup>3</sup> M = 10 <sup>6</sup> G = 10 <sup>9</sup>	<b>3-character code</b>  TKZ = Default Product Temperature Coefficient.  Information of typical product temperature coefficient can be found in the Technical Summary section of the datasheet.*	<b>5-character code</b>  TB = Tape Box  (pieces per box) <u>FGE50/101</u> 2K0 = 2,000  <u>FGE100/201/200</u> 1K0 = 1,000  <u>FGE301</u> 500 = 500

\* For the availabilities of non-default temperature coefficient, please check with us. Reference for TCR letter codes can be found in section (4) of Part Number Construction in the Appendices.

### ■ TECHNICAL SUMMARY

Characteristics	Limits	
Dielectric Withstanding Voltage, V AC or DC	FGE50 FGE101 FGE100 FGE200 / 201 / 301	300 350 500 700
Temperature Coefficient, PPM/°C*	FGE50 / 101 / 100 / 201	±200, ±400
	FGE200	±200
	FGE301	±400
Operating Temperature Range, °C	-55~+200	
Insulation Resistance, MΩ	10 <sup>4</sup>	
Fusing Condition, W	Interrupts in max. 60 seconds at below overload FGE50: 8 FGE101 / FGE100 / 201: 16 FGE200: 20 FGE301: 24	

\* Not applicable to all resistance values. Please check with us regarding the PPM of specific resistance value(s).

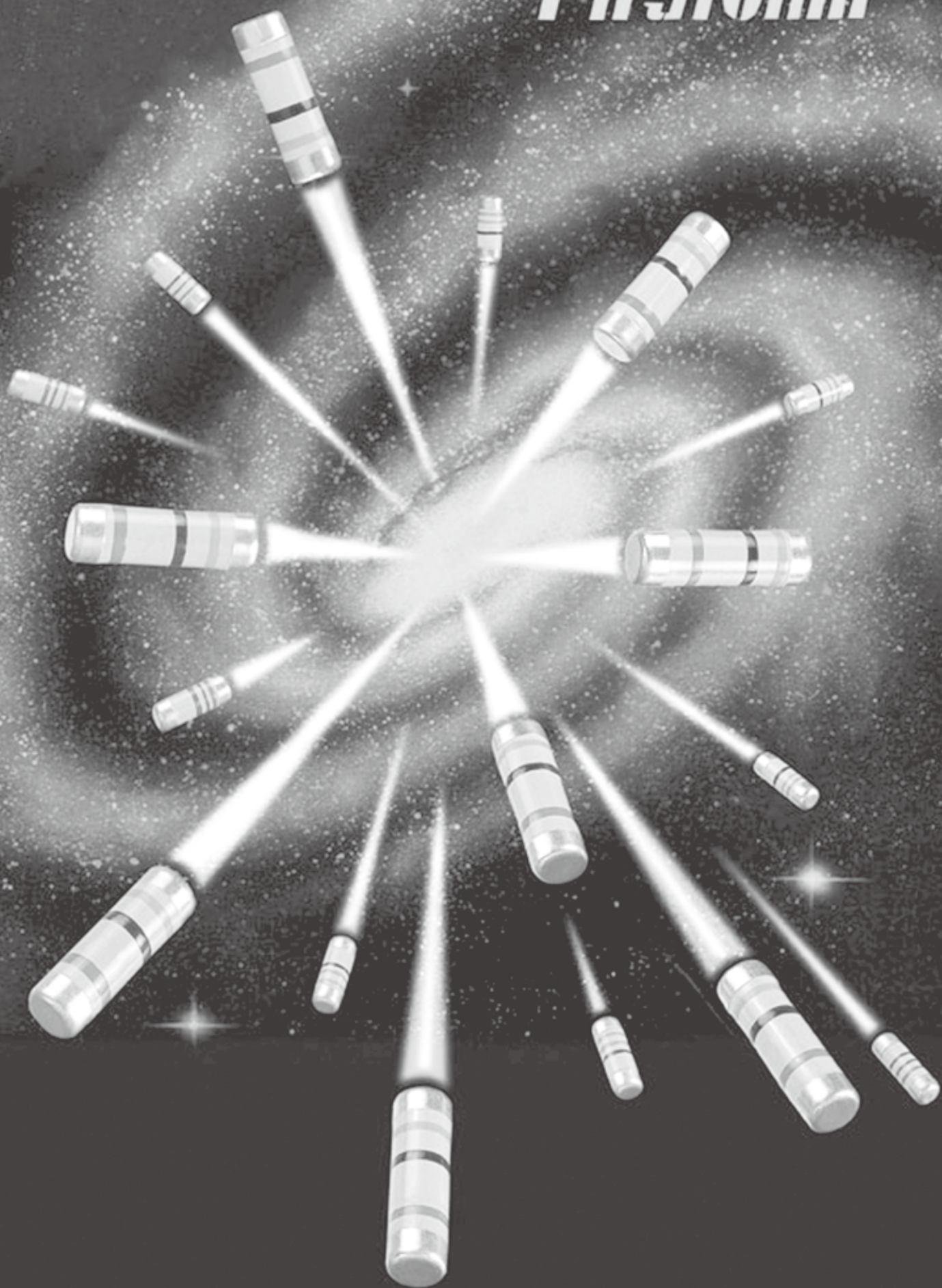
FGE

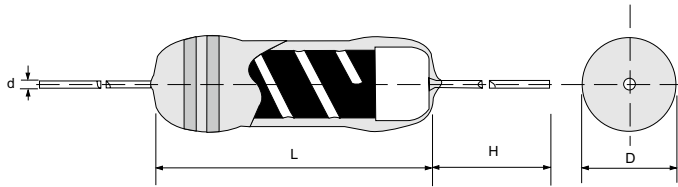
## ■ PERFORMANCE SPECIFICATIONS

Characteristics	Test Conditions	Limits	
Short Time Overload	<b>IEC 60115-1 4.13</b> 2 seconds 2.5x rated voltage (not over max. overload voltage)	±5%	
Load Life In Humidity	<b>IEC 60115-1 4.24</b> 56 days rated load (not over max. working voltage) at (40±2)°C and (93±3)% relative humidity	±5%	
Load Life 1,000 hours	<b>IEC 60115-1 4.25.1</b> Rated load (not over max. working voltage) with 1.5 hours ON, 0.5 hours OFF, at (70±2)°C	±5%	
Resistance To Soldering Heat	<b>IEC 60115-1 4.18.2</b> Leads immersed till 3mm from the body in (260±5)°C solder for 10±1 seconds	±1%	
Solderability	<b>IEC 60115-1 4.17.2</b> Solder area covered after (230±3)°C/(2±0.2) seconds with flux applied	FGE50 / 101 / 100 / 201	90% Min.
		FGE200 / 301	95% Min.
Vibration	<b>IEC 60115-1 4.22</b> Six hours in each parallel and axial direction with a simple harmonic motion having an amplitude of 1.52mm and 10 to 2,000 Hz.	±1%	
Thermal Endurance	<b>IEC 60115-1 4.25.3</b> 1000 hours at 200°C without load	±1%	
Thermal Shock	<b>IEC 60115-1 4.19</b> -55°C 30minutes, +155°C 30minutes, 5 cycles	±2%	



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## Specifications Per

• IEC 60115-1

## Features

- Flameproof multi-layer coating equivalent to UL 94 V-0
- Flameproof feature equivalent to overload test UL 1412
- Color code per MIL & EIA standards
- Special tin-plated electrolytic copper lead wire
- Products meet RoHS requirements and do not contain substances of very high concern identified by European Chemicals Agency

## ■ DIMENSIONS

Type	Body Length (L , mm)	Body Diameter (D, mm)	Lead Wire Length (H , mm)	Lead Wire Diameter (d , mm)	Net Weight Per 1000Pcs
FGE25	6.5 ± 0.5	2.4 ± 0.2	26 ± 3.0	0.55 ± 0.03	220 grams
FGE26	6.5 ± 0.5	2.4 ± 0.2	26 ± 3.0	0.55 ± 0.03	220 grams
FGE53	6.5 ± 0.5	2.4 ± 0.2	26 ± 3.0	0.55 ± 0.03	220 grams

## ■ GENERAL SPECIFICATIONS

Type	Power Rating (at 70°C)	Maximum Working Voltage	Minimum Resistance	Maximum Resistance	Resistance Tolerance	Available Resistance Values
FGE25	1/4W	250V	2.2Ω	15KΩ	±5%	E-24
FGE26	1/3W	250V	2.2Ω	15KΩ	±5%	E-24
FGE53	1/2W	350V	2.2Ω	10KΩ	±5%	E-24

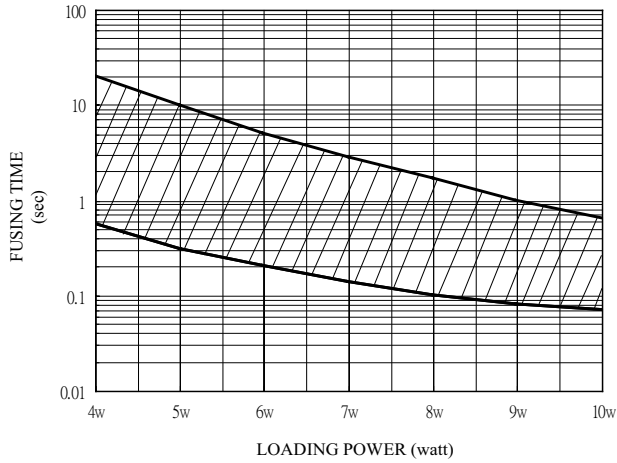
Other resistance values and higher wattages available on request.

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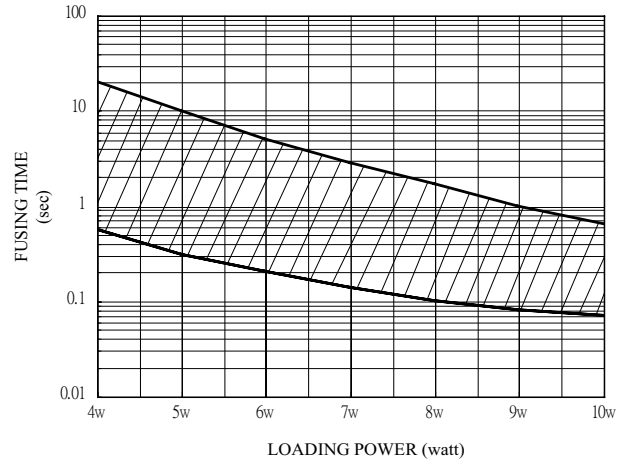
### FGE25

FUSING CHARAC TERISTICS  
USING CONST ANT VOLTAGE



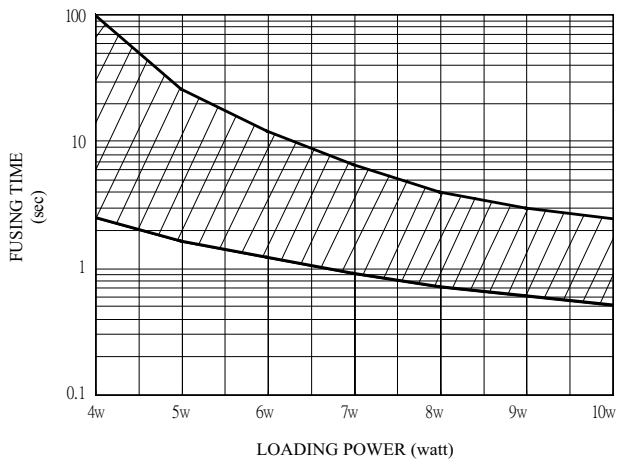
### FGE26

FUSING CHARAC TERISTICS  
USING CONST ANT VOLTAGE



### FGE53

FUSING CHARAC TERISTICS  
USING CONST ANT VOLTAGE





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## ■ PART NUMBER

Example: FGE53J10K0TKZTB5K0

<b>FGE53</b>	<b>J</b>	<b>10K0</b>	<b>TKZ</b>	<b>TB5K0</b>
Type	Tolerance	Resistance	TCR	Packaging
	J (5%)	10KΩ <b>4-character code</b> containing - 3 significant digits 1 letter multiplier  <b>OHM MULTIPLIER</b> R = 1 K = 10 <sup>3</sup> M = 10 <sup>6</sup> G = 10 <sup>9</sup>	<b>3-character code</b>  TKZ = Default Product Temperature Coefficient.  Information of typical product temperature coefficient can be found in the Technical Summary section of the datasheet.*	<b>5-character code</b>  TB = Tape Box  (pieces per box) <u>FGE25/26/53</u> 5K0 = 5,000

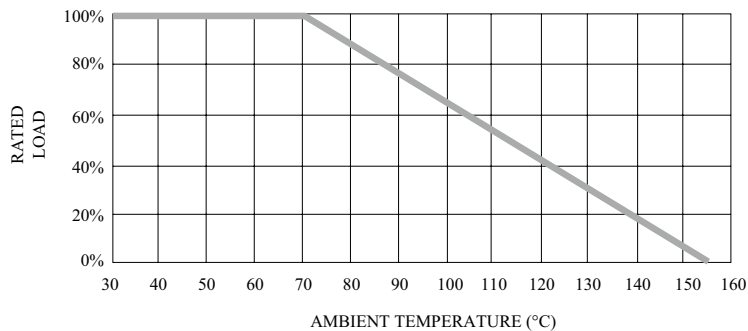
\* For the availabilities of non-default temperature coefficient, please check with us. Reference for TCR letter codes can be found in section (4) of Part Number Construction in the Appendices.

## ■ TECHNICAL SUMMARY

Characteristics	Limits
Dielectric Withstanding Voltage, VAC or DC	500
Temperature Coefficient, PPM / °C*	±200
Operating Temperature Range, °C	-55 ~ +155
Insulation Resistance, MΩ	10 <sup>4</sup>

\* Not applicable to all resistance values. Please check with us regarding the PPM of specific resistance value(s).

## ■ POWER DERATING CURVE



## ■ PERFORMANCE SPECIFICATIONS

Characteristics	Test Conditions	Limits
Load Life In Humidity	<b>IEC 60115-1 4.24</b> 56 days rated load (not over max. working voltage) at (40±2)°C and (93±3)% relative humidity	±5%
Load Life 1,000 hours	<b>IEC 60115-1 4.25.1</b> Rated load (not over max. working voltage) with 1.5 hours ON, 0.5 hours OFF, at (70±2)°C	±5%
Resistance To Soldering Heat	<b>IEC 60115-1 4.18.2</b> Leads immersed till 3mm from the body in (260±5)°C solder for 10±1 seconds	±1%
Solderability	<b>IEC 60115-1 4.17.2</b> Solder area covered after (235±3)°C/(2±0.2) seconds with flux applied	95% Min.
Vibration	<b>IEC 60115-1 4.22</b> Six hours in each parallel and axial direction with a simple harmonic motion having an amplitude of 1.52mm and 10 to 2,000 Hz.	±1%
Thermal Endurance	<b>IEC 60115-1 4.25.3</b> 1000 hours at 155°C without load	±1%
Thermal Shock	<b>IEC 60115-1 4.19</b> -55°C 30minutes, +155°C 30minutes, 5 cycles	±1%