

## Fujipoly Data Sheet

# SARCON<sup>®</sup> EGR-11F

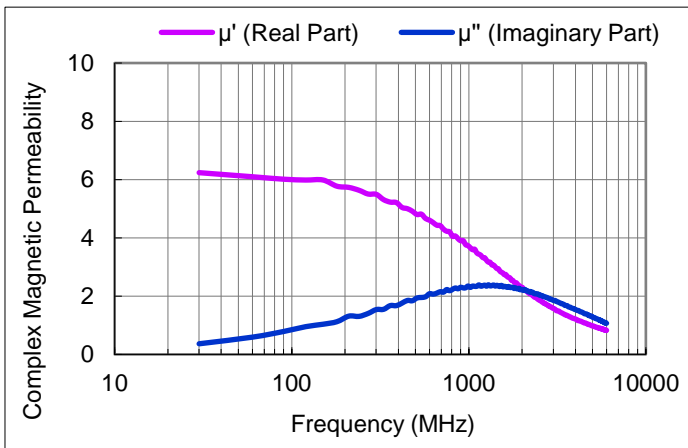
### Electromagnetic Wave Absorption Type

#### FEATURES

##### Silicone Gap Filler Pad for Absorption of Electromagnetic Wave

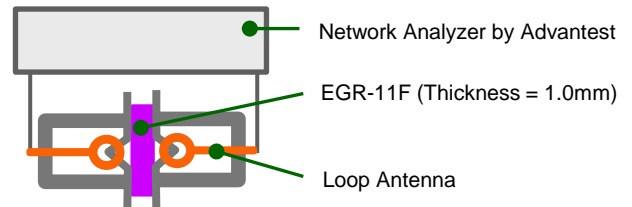
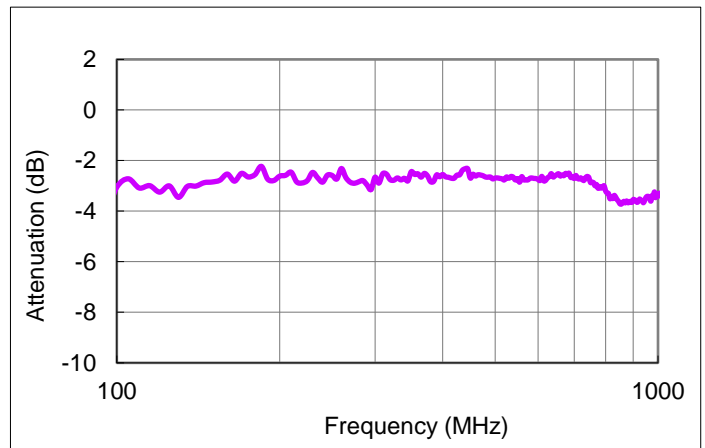
- Effective to absorb and damp a wide range of electromagnetic waves and also effective as a high performance thermal interface material.
- Easily filling small gaps of IC chip surface with soft gel texture.
- Good workability to simply insert the product between circuit board and casing.
- Self-adhesive gel surface does not require any adhesive tape for assembly.
- Extremely low level of low molecular siloxane.

#### COMPLEX MAGNETIC PERMEABILITY



Specimen ; EGR-11F (Thickness = 1.0mm)

#### SHIELDING EFFECTIVENESS



Test method : KEC method which is ASTM E 1851 (MIL-STD-285)

#### THERMAL RESISTANCE Unit : K-cm<sup>2</sup>/W (K-in<sup>2</sup>/W)

Compression Force	0.5mmT	1.0mmT	1.5mmT
100kPa /14.5psi	6.8 (1.05)	9.6 (1.48)	12.1 (1.88)
300kPa /43.5psi	6.4 (0.99)	8.8 (1.36)	10.4 (1.61)
500kPa /72.5psi	6.1 (0.95)	8.4 (1.30)	9.7 (1.50)

Test method: Fujipoly Test method, FTM-P3050 by TIM Tester 1300 which is ASTM D5470 equivalent

- Specimen Area; DIA.33.0mm (1.30in)

**TYPICAL PROPERTIES**

Properties	unit	EGR-11F	Test method	Specimen		
Physical Properties	Color	-	Dark Gray	Visual	-	
	Specific Gravity	-	3.1	ASTM D 792	A	
	Hardness Highest Value	Shore OO	56	ASTM D2240	B	
Electrical Properties	Initial Magnetic Permeability	$\mu$ iac	6	-	-	
	Volume Resistivity	Ohm-m	$1.0 \times 10^{10}$	ASTM D 257	C	
	Breakdown Voltage	V/mm (volts/mil)	500 (12.7)	ASTM D 149	C	
	Dielectric Constant	-	50Hz	28.33	ASTM D 150	A
			1kHz	27.05		
			1MHz	26.09		
	Dissipation Factor	-	50Hz	0.031	ASTM D 150	A
1kHz			0.020			
1MHz			0.005			
Thermal Properties	Thermal Conductivity	W/m-K	1.0 by Hot Wire	ASTM D 2326	-	
			0.8 by Hot Disk	ISO/CD 22007-2		
	Useful Temperature	$^{\circ}$ C ( $^{\circ}$ F)	-30 to +120 (-22 to +248)		-	-
	Low molecular Siloxane	wt%	D <sub>4</sub> to D <sub>20</sub> Total	0.0071	Gas Chromatography	-
Flame Retardant	-	V-0		UL 94	-	

• Specimen A: 2mmT • Specimen B: 20mmW x 60mmL x 10mmT • Specimen D: 120mmW x 120mmL x 1mmT

**COMPRESSION FORCE** Unit : N/6.4cm<sup>2</sup> (psi)

Compression Rate	0.5mmT	1.0mmT	1.5mmT
10%	54 (12.2)	41 (9.3)	48 (10.8)
20%	288 (65.3)	225 (51.0)	202 (45.8)
30%	566 (128.2)	422 (95.6)	354 (80.2)
40%	879 (199.1)	590 (133.7)	521 (118.0)
50%	1132 (256.5)	813 (184.2)	763 (172.9)
Sustain 50%	846 (191.7)	408 (92.4)	367 (83.2)

Test method: Measured by ASTM D575-91 for reference

- Specimen Area; DIA.28.6mm (1.13in) • Platen Area; DIA. 28.6mm (1.13in) • Sustain 50%: Sustain 50% at 1 minute later
- Compression Velocity; 5.0mm/minute

**TYPES AND CONFIGURATION**

Series	Product Name	Thickness	Sheet Size	Flame Retardant
SARCON <sup>®</sup> EGR-11F	50EG-11F	0.5mm $\pm$ 0.15mm	300mm x 200mm (Recommended Usable Size: 290mmx190mm)	UL94 V-0
	100EG-11F	1.0mm $\pm$ 0.20mm		
	150EG-11F	1.5mm $\pm$ 0.20mm		

## **HANDLING NOTES**

- It is recommended to use the material in up to 30% of compression ratio. Using the material beyond the recommended compression rate may result in excessive silicone oil exudation.
- It is recommended to compress the material with the equal ratio on the whole surface. Partial excessive stress may also result in excessive silicone oil exudation.

## **WARRANTY STATEMENT**

- Fujipoly has been utilizing Hot Disk method and TIM Tester method since Fujipoly defined them as Fujipoly standard.
- Properties of the products may be revised due to some changes for improving performance.
- Properties values in this document are not specification or guaranteed.
- This product is made of silicone, and silicone oil may exude from the product.
- This product is made of silicone, and low molecular siloxane may vaporize depending on operating conditions.
- The product is designed, developed, and manufactured for general industrial use only. Never use for medical, surgical, and/or relating purposes. Never use for the purpose of implantation and/or other purposes by which a part of or whole product remains in human body.
- Before using, a safety must be evaluated and verified by the purchaser.
- Contents described in the document do not guarantee the performances and qualities required for the purchaser's specific purposes. The purchaser is responsible for pre-testing the product under the purchaser's specific conditions and for verifying the expected performances.
- Statements concerning possible or suggested uses made herein may not be relied upon, or be constructed, as a guaranty of no patent infringement.
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