ANTENNA ENGINEERS FOR ANTENNA ENGINEERS

PURE BLUE

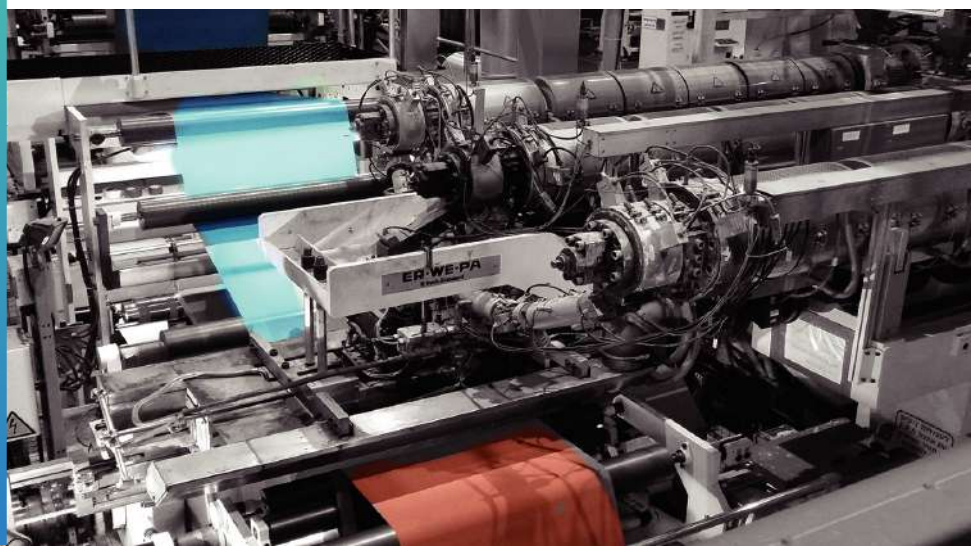
DISRUPTIVE POLYMERS FOR ULTIMATE CONNECTIVITY

TECHNICAL
DATASHEET

BlueFlame

BF275F-120-H/H
BF275F-60-H/H
BF275F-30-H/H
BF275F-20-H/H
BF275F-16-H/H

PCB Laminate for RF&MW Applications



BlueFlame is based on PureBlue proprietary polymer chemistry and continuous lamination technology.

Both the process and the substrate structure and composition are protected by existing patents and patent pendings.

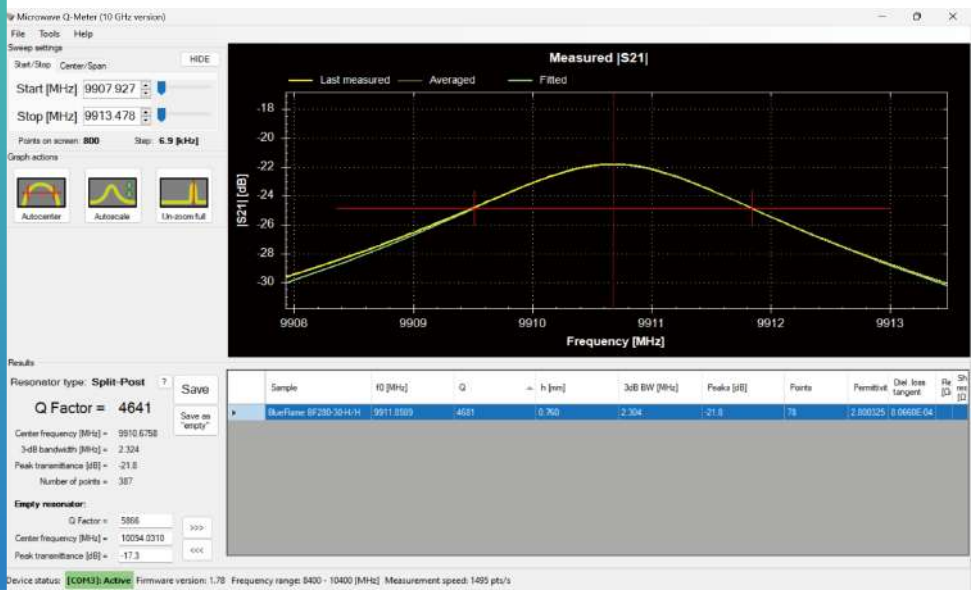
Lowest-loss PCB Laminates
PureBlue Zhongshan Technology Co. Ltd. Zhongshan, Guangdong, China
Tel: +33 781523052 Email: manuel@purebluerf.com

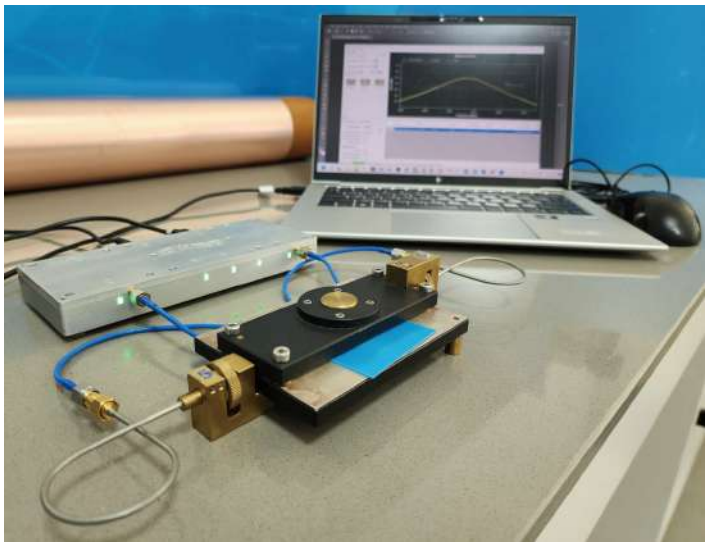
PRELIMINARY TECHNICAL
DATASHEET

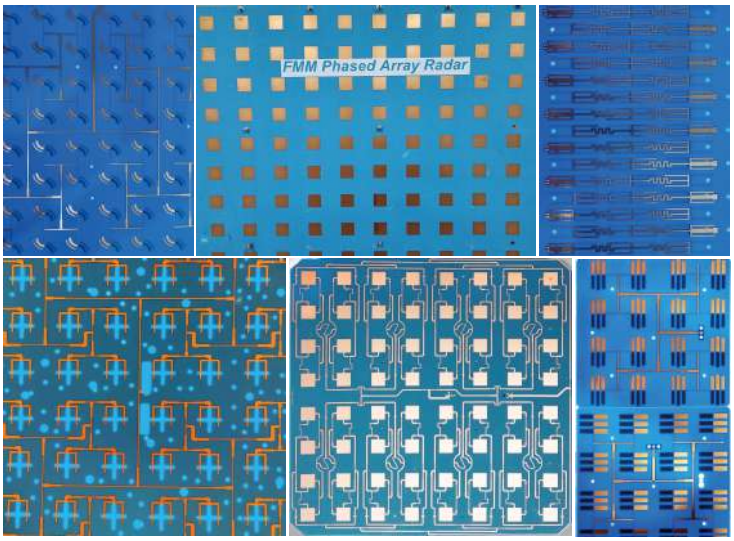
BlueFlame

BF275F-120-H/H
BF275F-60-H/H
BF275F-30-H/H
BF275F-20-H/H
BF275F-16-H/H

PCB Laminate for RF&MW Applications







The BlueFlame laminate is designed to meet most demanding application scenarios.

The absolute glass fiber free system delivers most isotropic substrate.

Multiple short time expositions to heat of 310 °C, capacity to operate at above 120 °C.

The proprietary to PureBlue continuous lamination process of high throughput secures tight thickness tolerance and very narrow fluctuation of dielectric constant.

The BF275F polymer compound features highly cross-linked polyolefin system designed for critical microwave components, antennas, power amplifiers and subassemblies.

Superior mechanical and electrical performance make the BF275F laminate system the material of choice for your lowest loss, high frequency applications.

The isotropic subtrate structure secures substantial advantage in PIM readings vs. anisotropic analogies.
The highest impact was recorded with dense PTH designs, better than -163 dBc under dynamic test and better than -170 dBc under static one.
PIM designated lowest profile foils apply in our performance-on-demand product versions.

Lowest-loss PCB Laminates
PureBlue Zhongshan Technology Co. Ltd. Zhongshan, Guangdong, China
Tel: +33 781523052 Email: manuel@purebluerf.com

PURE BLUE

TECHNICAL
DATASHEET

Typical Specification Values

Property	IPC-TM 650 or ASTM	Units	Value	Condition / Remarks
Dielectric Constant	IPC 2.5.5.5	---	2.75±0.02	@10 GHz 23 °C
Dissipation Factor		---	0.0009	
Peel Strength	IPC 2.4.8	N/mm	1.8-2.1	Typical
Moisture Absorption	IPC 2.6.2.1	wt. %	<0.04	Typical
Volume Resistivity	IPC 2.5.17.1	MΩ - cm	>3X10^7	
Surface Resistivity	IPC 2.5.17.1	MΩ - cm	>3X10^7	
Dielectric Strength	IPC 2.5.6	kV/mm	19.7	
Flexural Strength, min	IPC 2.4.4	GPa	4	
Thermal Conductivity	ASTM C518	W/m-K	0.22	
x-y CTE, (-45 to 140 °C)	DMA/TMA	ppm/°C	<60	
z CTE, (-45 to 120 °C)	DMA/TMA	ppm/°C	140	
Recommended operational temperature range		°C	-45 to +125	For operation outside this temperature range please ask your technical contact.
Flammability	UL-94		V0	
RoHS and Lead Free compatibility		---	Compatible	

PureBlue Zhongshan Technology Co. Ltd. Zhongshan, Guangdong, China
Tel: +33 781523052 Email: manuel@purebluerf.com

PURE BLUE

TECHNICAL
DATASHEET

Electro Deposited HTE Copper Foil Specifications

Typical copper cladding is 15 µ HTE specified below. Other foil thickness - 12, 18, 24 and 35 may apply per demand.
Other foil types may apply - reverse treated, rolled. Copper foil may be replaced with aluminum rolled. Aluminum thickness - 20 to 50 µ

Nominal thickness, µm	Area weight, g/m2	Tensile strength, N/mm2	Elongation, %	Resistivity at 20 °C, Ohm g/m2
15± 1	125 ± 10	> 245	> 3	< 0,162

Feature	Unit	Gauge	IPC	
		25µ	IPC-4562	IPC-MF-650
Shiny side roughness, Ra	µ	0,2-0,4	3.5.6	2.2.17
Matt side roughness, Rz	µ	4-5	3.4.5	2.2.17
Tensile strength, room temperature	MPa,	> 276	3.5.1	2.4.18
Elongation, room temperature	%	> 10	3.5.3	2.4.18
Solderability	Meets requirements of IPC-4562		3.6.3	2.4.12

Panel Thickness (excluding copper foil)

BF275F-120-H/H – 3048 µ / 0.120" with a tolerance of ± 75 µ
BF275F-60-H/H – 1524 µ / 0.060" with a tolerance of ± 40 µ
BF275F-30-H/H – 760 µ / 0.030" with a tolerance of ± 25 µ
BF275F-20-H/H – 508 µ / 0.020" with a tolerance of ± 15 µ
BF275F-16-H/H – 406 µ / 0.016" with a tolerance of ± 12 µ

Panel Dimensions

- Standard 608X1220 mm

- Panel length may be increased to maximize the yield for massive orders upon arrangement.

Lowest-loss PCB Laminates
PureBlue Zhongshan Technology Co. Ltd. Zhongshan, Guangdong, China
Tel: +33 781523052 Email: manuel@purebluerf.com

Rev. 2.3 2024.11.09