

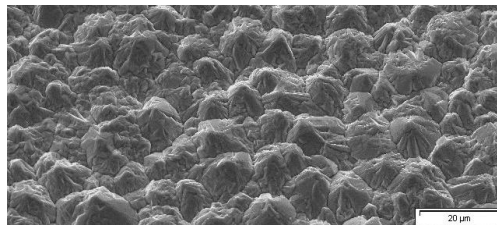
HFZ-B

Technical Characteristics

HFZ-B represents a so-called "Reverse Treated Foil", where bonding treatment is applied to the "shiny" side. The final product exhibits Very Low Profile characteristics for the treatment side. Base foil is characterized by enhanced high temperature elongation properties [Grade 3].

Its zinc free HFZ treatment provides high bond strength on a wide range of high T_g, low dielectric constant substrates and new engineering plastics. A pure copper treatment limits negative effects on PIM.

The product is designed for the manufacture of high performance laminates with extended thermal stability and electrical properties designated for very high frequency circuitry applications, as for RF antennas and wireless devices. PCB's manufactured with such laminates may be designed to operate at ultra-high frequencies often in hostile or remote locations where long term reliability and stability is of crucial importance.



Untreated matte side



Treated drum side

Additional alternatives for ultra-high frequencies (> 40 GHz) are our extremely smooth BF-HFZ treatment (see separate datasheet).

Typical average properties*

HFZ-B								
MEASURED PARAMETERS		UNITS	PRODUCT GAUGE			IPC		
Nominal Thickness		µm oz.	18 1/2	35 1	70 2	Specification IPC-4562A	Test Method IPC-TM-650	
Area Weight (± 5 %)		oz/ft ² g/m ² g/254 in ²	0.50 154 25.2	0.93 283 46.4	1.89 576 94.4	(a)1.2.5, table 1-1 (b)3.4.4 (c)4.6.3	2.2.12	
Untreated Side Roughness (Rz)	ISO	µm (µ.inch)	≤ 6.0 (≤ 236)	≤ 9.0 (354)	≤ 10 (≤ 394)	-	2.2.17	
	JIS		≤ 5.0 (≤ 197)	≤ 7.5 (≤ 294)	≤ 8.4 (≤ 331)			
Treated Side Roughness (Rz)	ISO		≤ 5.1 (≤ 201)					3.4.5
	JIS		≤ 4.2 (≤ 165)					-
Treated Side Roughness (Rq [RMS])			≤ 1.1 (≤ 43)					
Tensile Strength Transverse at RT		MPa	≥ 276 (≥ 40)			3.5.1	2.4.18	
Tensile Strength Transverse at 180 °C		(k.Lb/in ²)	≥ 138 (≥ 20)					
Elongation Transverse at RT		%	≥ 6	≥ 9	≥ 15	3.5.3		
Elongation Transverse at 180 °C			≥ 3					
Peel Strength (RT)	PTFE ^{1/}	N/mm (Lb/in)	≥ 1.05 (≥ 6.0)	≥ 1.75 (≥ 10)		3.5.4	2.4.8	
High Temp. Tarnish Resistance on untreated side		-	120 min @ 180 °C in air: pass			-		
Solderability		-	Complies with IPC specification			3.6.3	2.4.12	

^{1/} Laminate construction with thickness ≥ 0.5 mm

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* All of this Technical Information has been determined with due care and thoroughness. However, because the conditions of use and process and application technologies employed can substantially vary, the provided data and figures can only serve as non-binding guidelines. They do not constitute a guarantee that the purchased item will possess certain attributes. For this reason, no liability whatsoever can be assumed for them. The buyer is obliged to check the suitability of all supplied products.