

tec-speed 20.0 - VT-870 / VT-870 Bondply UL Approval: E214381 Version: B1.0

Laminate/Prepreg

General Information

- > High Tg Ceramic Filled Hydrocarbon Laminate & Prepreg
- > Excellent Thermal Reliability
- > Excellent peel strength

Application

- > Cellular Base Station Antenna
- > WiMax Antenna Networks
- > Power Amplifiers
- > Automotive Radar
- > LNB (Low Noise Block) for Broadcast Satellites
- > RF Identification Tags (RFID)

Availability

Material	VT-870 L330	VT-870 H348
Dk	3.3	3.48
Dielectric thickness (mil)	20, 30, 32, 40, 60	3.3, 4.0**, 6.6, 10, 16.6, 20, 30, 40, 60
Copper thickness	Hoz, 1oz	Hoz, 1oz, 2oz

** Please note Dk of 4mil VT-870 H348 is 3.33 and Df is 0.0035@10GHz. Other thickness data refers to property sheet.

Storage Condition & Shelf Life

Properties	Prepreg	Laminate
Storage Condition	Temperature	≤5 °C
	Relative humidity	/
Shelf Life	6 months	24 months

Note: The prepreg exceeding shelf life should be retested.

Disclaimer: The information and data contained in this technical literature is based on data and knowledge correct at the time of publishing/printing and is believed to be accurate and is offered in good faith for the benefit of the user. The user should make his own tests to verify the suitability of this product for any application before its use. All data are typical values only and subject to change without notice.

CORPORATE HEADQUARTERS

Ventec Electronics Co. Ltd.
308 TaiShan Rd,
New District Suzhou,
Jiangsu, P.R. China 215129
T: +86 512-68091810
Email: sales@ventec.com.cn

EMEA REGIONAL HEADQUARTERS

Ventec Europe
Unit 1 Trojan Business Centre,
Tachbrook Park Estate,
Leamington-Spa, CV34 6RH, UK
T: +44 1926-889822
Email: sales@ventec-europe.com

AMERICAS REGIONAL HEADQUARTERS

Ventec USA
720 Lee St., Elk Grove Village,
Illinois, IL 60007,
United States of America
T: +1 630-4221627
Email: saleseast@ventec-usa.com

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Properties Sheet

Properties	Test Method	Units	VT-870 L330	VT-870 H348
Dielectric Constant @10GHz	IPC-TM-650 2.5.5.5 Clamped Stripline	-	3.3±0.05	3.48±0.05
Design Dk (1.7~5GHz)	Differential Phase Length Method	-	3.45	3.66
Dissipation Factor @2.5GHz	IPC TM650 2.5.5.13	-	0.002	0.0032
@10GHz	Cavity Resonator	-	0.0025	0.0037
PIM*1	43dBm, 1900MHz	dBc	-160	-160
Tg	IPC-TM-650 2.4.24	°C	280	280
Td	ASTM D3850	°C	402	410
Z-CTE (50~250°C)	IPC-TM-650 2.4.24	ppm/°C	35	31
Thermal Conductivity	ASTM D5470	W/mK	0.72	0.69
Peel Strength (1oz)	IPC-TM-650 2.4.8	Lb/in	6.0	6.0
Flammability	UL-94	Rating	V-0	V-0
IPC4103	-	-	/10 /240	/10 /240

All test data provided are typical values and not intended to be specification values.

Prepreg (VT-870 Bondply)

Glass Style	Pressed Thickness	Dielectric Constant @ 10GHz (IPC-TM-650 2.5.5.5 Clamped stripline)	Dissipation Factor @ 10GHz (Cavity Resonator)
VT-870 BH348	0.004" (100µm)	3.52±0.05	0.0035

VT-870 Bondply is compatible in multi-layer constructions with VT-870 laminate.

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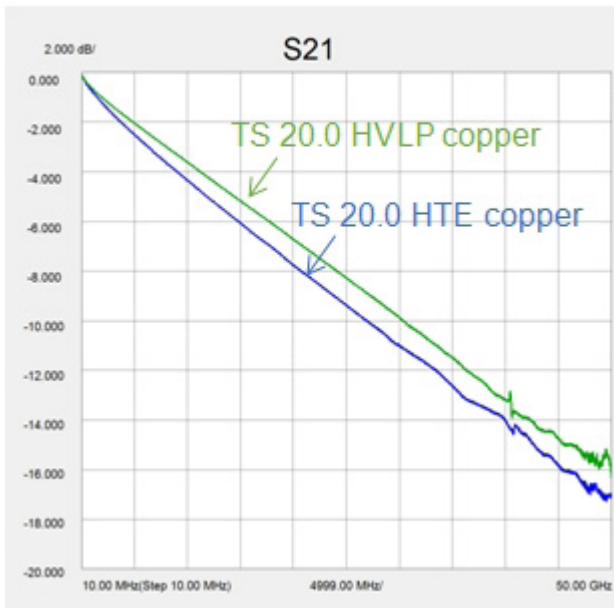
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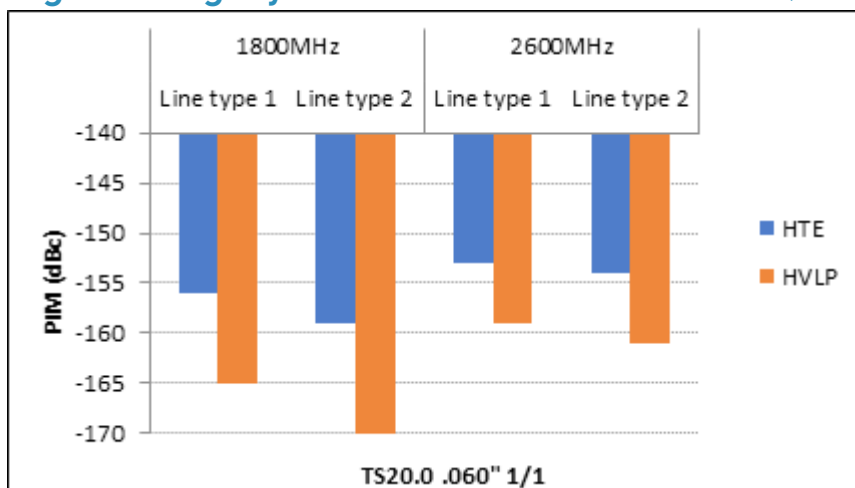
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Signal Integrity – Insertion Loss

12.4 mil trace width



Signal Integrity – Passive Intermodulation (PIM)



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