



Wistron NeWeb Corporation

Specification

Customer Name			
Date	5/14/2004		
OEM P/N	DBA-BSMA-01		
Description	Omnidirectional Antenna For 802.11g/a		
Version	A00	Doc. Version	1

Provided By Wistron NeWeb Corp	Reviewed By Wistron NeWeb Corp	Approved By Customer Company
Steven Chang	Eric Fang	

wistron

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Electrical Specifications

Frequency Range(GHz)	2.4~2.5 / 4.9 ~5.85
Gain (dBi)	2.4GHz: 2 (typical) 5.1GHz: 2.5 (typical) 5.8Ghz: 2.5(typical)
VSWR	2:0:1 Max.
Return Loss	-10db Max.
HPBW in Hozirontal (deg.)	360
HPBW in Vertical (deg.)	78 (typical)
Polarization	Linear, Vertical
Impedance	50 Ohms (typical)

Mechanical Specifications

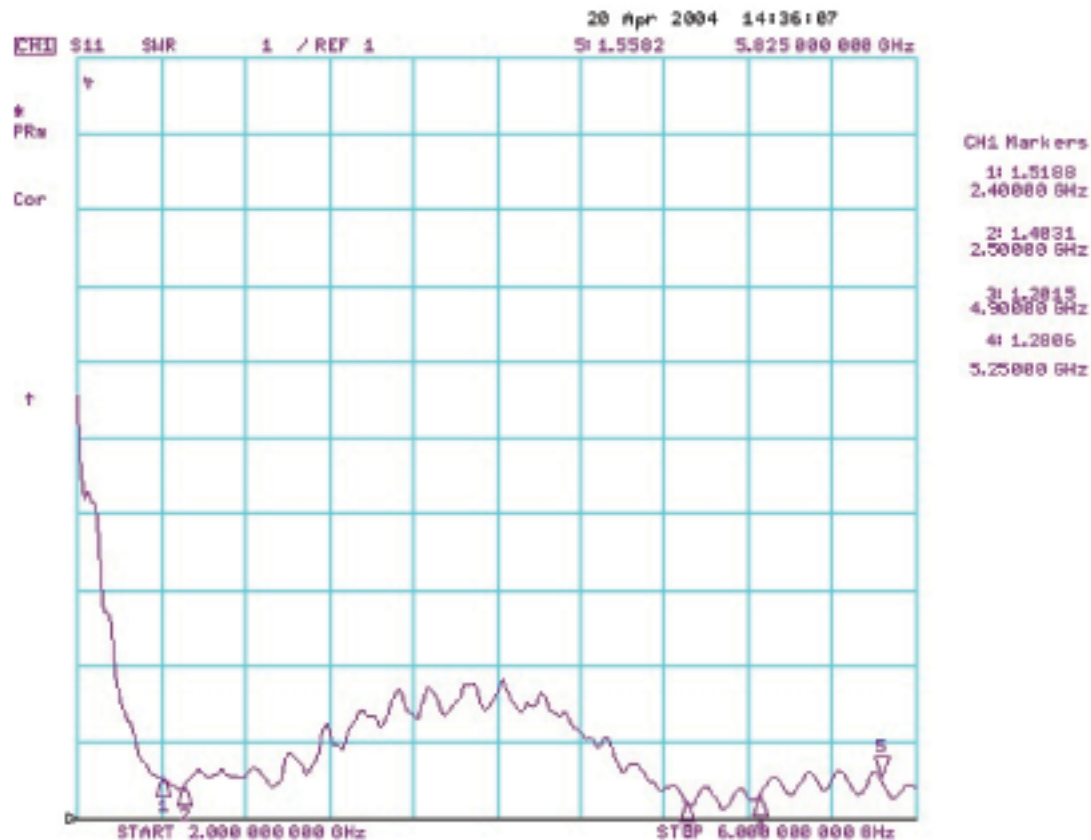
Connector type	SMA PLUG R/P (MALE-FEMALE)
Plastic Color	Black
Coaxial Cable Type	RG-178/U
Coaxial Cable Type	Light Orange
Radome Material	TPE
Radiator Material	Brass
Working Temperature & Humidity	-25°C - +75°C 90% @ 25°C



Electronical Specification Test Report

VSWR & Return Loss for DBA-BSMA Antenna

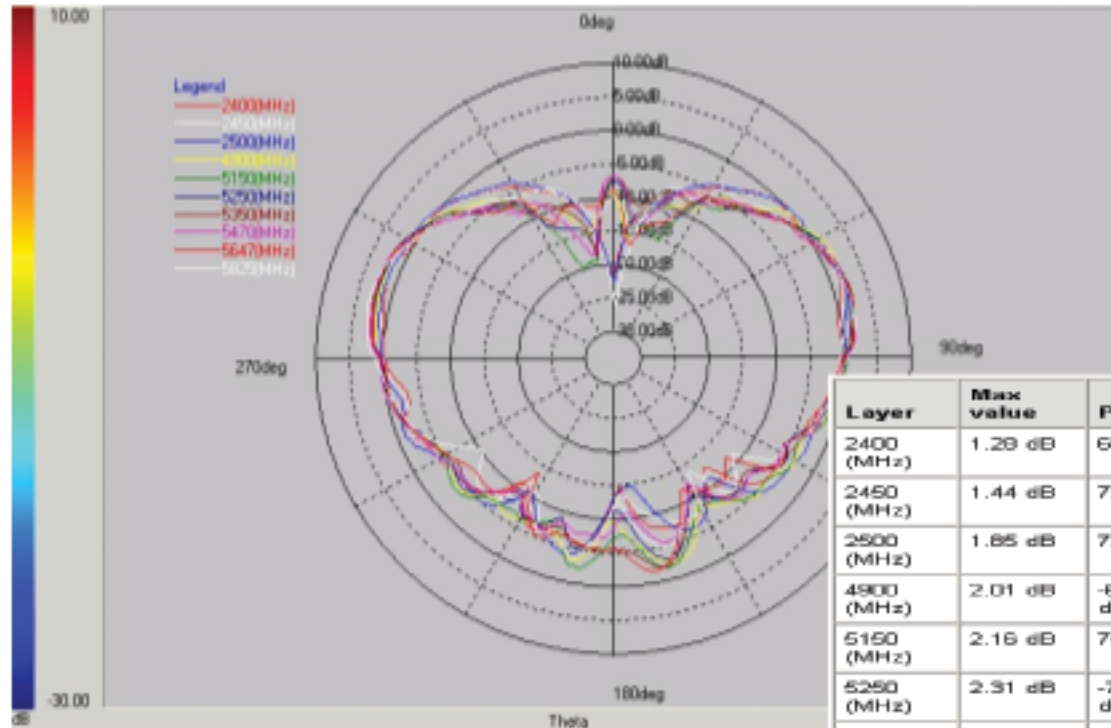
VSWR



Electrical Specification Test Report

Antenna Radiation Pattern; DBA-BSMA Antenna

Antenna pattern-ZX plane

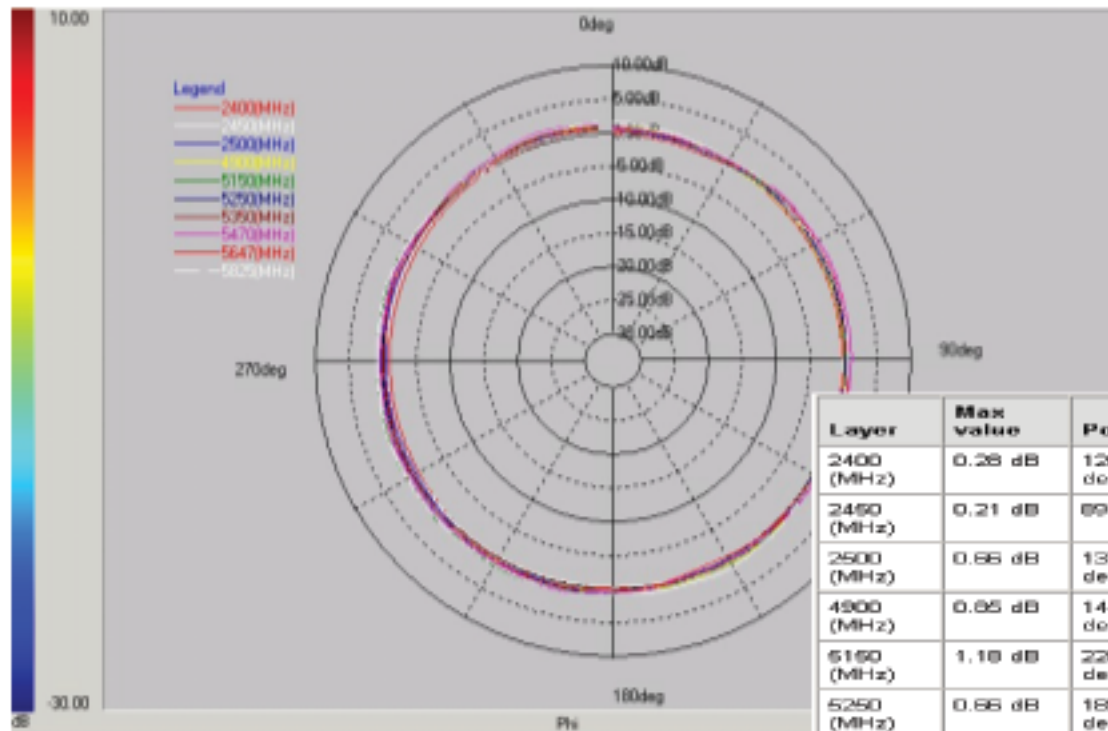


Layer	Max value	Position	Min value	Position	Average
2400 (MHz)	1.28 dB	69.00 deg	-22.21 dB	-0.01 deg	-3.98 dB
2450 (MHz)	1.44 dB	72.00 deg	-26.51 dB	3.00 deg	-3.79 dB
2500 (MHz)	1.85 dB	72.00 deg	-23.01 dB	-0.01 deg	-3.44 dB
4900 (MHz)	2.01 dB	-65.00 deg	-16.66 dB	6.02 deg	-3.26 dB
5150 (MHz)	2.16 dB	75.00 deg	-20.32 dB	-17.98 deg	-3.39 dB
5250 (MHz)	2.31 dB	-75.00 deg	-17.72 dB	-9.01 deg	-3.79 dB
5350 (MHz)	2.48 dB	75.00 deg	-19.03 dB	-9.01 deg	-3.52 dB
5470 (MHz)	2.41 dB	-69.00 deg	-18.62 dB	-11.98 deg	-3.78 dB
5647 (MHz)	2.51 dB	-72.00 deg	-17.26 dB	8.99 deg	-3.80 dB
5825 (MHz)	3.07 dB	-78.00 deg	-15.63 dB	8.99 deg	-3.68 dB

Electrical Specification Test Report

Antenna Raditation Pattern; DBA-BSMA Antenna

Antenna pattern-XY plane



Layer	Max value	Position	Min value	Position	Average
2400 (MHz)	0.28 dB	126.01 deg	-1.05 dB	264.02 deg	-0.33 dB
2450 (MHz)	0.21 dB	69.99 deg	-0.59 dB	237.00 deg	-0.22 dB
2500 (MHz)	0.66 dB	137.98 deg	-0.45 dB	242.99 deg	0.16 dB
4900 (MHz)	0.65 dB	144.00 deg	-0.36 dB	33.01 deg	0.33 dB
5150 (MHz)	1.18 dB	226.00 deg	-0.12 dB	24.01 deg	0.52 dB
5250 (MHz)	0.66 dB	189.01 deg	-0.48 dB	26.99 deg	0.24 dB
5350 (MHz)	0.73 dB	344.98 deg	-0.02 dB	183.00 deg	0.42 dB
5470 (MHz)	1.33 dB	342.01 deg	-0.12 dB	161.99 deg	0.64 dB
5647 (MHz)	0.91 dB	99.02 deg	-0.78 dB	21.03 deg	0.18 dB
5825 (MHz)	1.39 dB	153.00 deg	0.25 dB	51.00 deg	0.81 dB



TECHNICAL INFORMATION

ENSURE CA064 LOW ODOUR NO BLOOM CYANOACRYLATE

DESCRIPTION

Holdtite CA064 is an alkoxy based Cyanoacrylate ester giving almost no perceptible odour, producing no blooming on bond surfaces.

CA064 is medium viscosity and is an ideal product to choose where low odour/vapours are required.

TYPICAL APPLICATIONS

Typical applications include applications requiring cosmetic finish such as high quality plastics, medical devices, and cosmetic cases.

TYPICAL CURE PERFORMANCE

Although functional strength is achieved relatively fast, usually in less than 2 minutes full strength continues to develop over a period of 24 hours. Fixture times vary and are dependent on humidity and also gap sizes and substrate contribute to this also. The smaller the gap the faster the cure rate. Where relative humidity is low below 50% RH times of cure will be slower and an activator/accelerator may be required to increase speed.

TYPICAL PROPERTIES (UNCURED)

Resin:.....Alkoxy Ethyl Cyanoacrylate
Appearance:..... Colourless
Specific Gravity:..... 1.05
Viscosity:..... @ 60 RPM
Brookfield DVII..... 60 cps
Flashpoint:..... >85°C
Odour:..... Faint
Operating temperature -50°C -95°C

TYPICAL CURED PROPERTIES

Tensile Strength - Range ASTM D2095
Grit blasted steel:..... 10-25 N/mm²
Elastomer "N":..... 5-15 N/mm²

Shear Strength - Range ASTM D1002
Grit blasted steel:..... 14-22 (18)
Elastomer "N":..... 5-15 (10)
ABS:..... 6-20 (14)
Pvc:..... 3-10 (6)
Nitrile:..... 5-15 (10)
Neoprene:..... 5-15 (10)

CURE SPEED (FIXTURING)

Without activator:..... 20-90 seconds
With activator:..... <30 seconds

HEALTH & SAFETY

Danger: bonds skin and eye tissue in seconds

READ FULL MSDS

The information contained herein is produced in good faith and is believed to be reliable but is for guidance only. Holdtite and its agents cannot assume liability or responsibility for results obtained in the use of its products by persons whose methods are outside or beyond our control. It is the users responsibility to determine the suitability of any of the products and methods of use or preparation prior to use mentioned in our literature and furthermore the users responsibility to observe and adopt such precautions as may be advisable for the protection of personnel and property in the handling and use of any of our products.

MATERIAL SAFETY DATA SHEET

ENSURE CA064

1. Identification of Substances											
Product details: Single-component based on Cyanoacrylic acid/ethyl ester. More commonly known as Superglue Cyanoacrylate. Trade Name description: Spectrum Cyanoacrylate Article Number: Ensure CA064											
Manufacturers Name: Holdrite Adhesives Limited Ninth Avenue East, Tonn Valley Trading Estate, Gateshead, Tyne & Wear NE11 0EJ		Tel: 0191 4914433									
Emergency Information:											
2. Composition/Data on Components											
Chemical characterisation: CAS No. Designation: 27816-23-5 Methoxy Ethyl Cyanoacrylate Ester Identification Number(s): EINECS Number: 2303915											
Chemical characterisation Description: Adhesive Dangerous components:											
CAS No.	Designation	%	Index R-phrases								
Void											
3. Hazards Identification											
Additional information: Cyanoacrylate! Danger bonds skin and cyclize within seconds. Keep out of reach of children.											
4. First Aid Measures											
General information: No special measures required After inhalation: Supply fresh air After skin contact: Instantly wash with soap and rinse thoroughly. After eye contact: Rinse opened eye for several minutes under running water. Then consult doctor. After swallowing: Call a doctor immediately. Information for doctor: The following symptoms may occur: Breathing difficulty Treatment: In cases of irritation to the lungs, initial treatment with Dexamethason metered aerosol.											
5. Fire Fighting Measures											
Suitable extinguishing measures: CO2, extinguishing powder or water jet. Fight larger fire with alcohol-resistant foam. Special hazards caused by the material, its products of combustion or flue gases: Formation of toxic gases is possible during heating or in case of fire. Can be released in case of fire Nitrogen oxides (NOx), Carbon Monoxide (CO) Protective equipment: Do not inhale explosion gases or combustion gases.											
6. Accidental Release Measures											
Person-related safety precautions: Ensure adequate ventilation Measures for environmental protection: Prevent material from reaching sewage system, holes and cellars. Measures for cleaning/collecting: Collect mechanically Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust) Additional information: No dangerous materials are released.											
7. Handling and Storage											
Information for safe handling: Ensure good ventilation/exhaustion at the workplace. No special measures required. Keep containers tightly sealed. Open and handle containers with care. Information about protection against explosions and fires: Keep ignition sources away - Do not smoke. Storage Requirements to be met by storerooms and containers: Store only in the original container. Information about storage in one common storage facility: Do not store together with alkalis (caustic solutions) Further information about storage conditions: Store in cool, dry conditions in well sealed containers. Storage class: Class according to regulation on inflammable liquids: VbF: A III											
8. Exposure Controls and Personal Protection											
Additional information about design of technical systems: No further data, see item 7 Components with critical values that require monitoring at the workplace: <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">CAS No.</th> <th style="text-align: left;">Designation of material</th> <th style="text-align: left;">Type</th> <th style="text-align: left;">Value Unit</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="padding: 2px;">The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.</td> </tr> </tbody> </table> Additional information: Supply fresh air. When air is very dry humidity should be increased to 50-60% relative humidity of air. Cyanoacrylates are considered to be possible sensitises by inhalation, new legislation in 1996 may consider this as a formal risk, but as yet it is suggested as a safety phrase as additional information, see section 11. Personal protective equipment General protective and hygienic measures: The usual precautionary measures should be adhered to in handling the chemicals. Breathing equipment: Not required. Protection of hands: Protective gloves and protective skin cream. Eye protection: Tightly sealed safety glasses.				CAS No.	Designation of material	Type	Value Unit	The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.			
CAS No.	Designation of material	Type	Value Unit								
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.											

TDS 51

HSS 51

Adhesive Material Report; Used in DBA-SSMA Antenna

MATERIAL SAFETY DATA SHEET ENSURE CA064

2. Physical and Chemical Properties				
Form: Fluid				
Colour: Colourless				
Smell: Characteristic				
	Value/Range	Unit	Method	
Change in condition				
Melting point / Melting range:	Not determined			
Boiling point / Boiling range:	> 200	°C		
Flash point:		87 °C	DIN 51758	
Self-ignitability:	Product is not selfigniting.			
Danger of explosion:	Product is not explosive.			
Density at 20 °C	1,05 - 1,08 g/cm ³			
Solubility in / Miscibility with Water:	Not applicable			
Viscosity:	Not miscible or difficult to mix			
dynamic at 20 °C	2 - 600 mPas			
10. Stability and Reactivity				
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.				
Dangerous reactions: Exothermic polymerisation. Violent reactions with strong alkalis and oxidising agents. Reacts with amines. Heating occurs when water is added.				
Reacts violently with water				
Dangerous products of composition: No dangerous decomposition products known				
11. Toxicological Information				
Acute toxicity: not determined				
Primary irritant effect:				
On the skin: Irritant for skin and mucous membranes				
On the eye: Irritant effect				
Sensitisation: Sensitisation possible by inhalation				
Additional toxicological information:				
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.				
The material is not subject to classification according to EC lists in the last version.				
12. Ecological Information				
General notes:				
Water hazard class O (Self-assessment): generally not hazardous for water				
13. Disposal Considerations				
Product:				
Recommendation:				
Can be deposited with household garbage after consulting with the operator of the waste disposal facility and the pertinent authorities and under adherence to the necessary technical regulations.				
Polymerise carefully with water or alkali.				
Waste disposal key number 55905				
Uncleaned packaging:				
Recommendation: Polymerise carefully with water or alkali.				
14. Transport Information				
Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)				
ADR/RID-GGVS/E Class: 3 Inflammable liquids				
Number/Letter: 3/32 e				
Remarks: No dangerous goods due to the regulations for small quantities (below 3 l per unit or below 42 l per carton).				
15. Regulatory Information				
Designation according to EC guidelines:				
Observe the normal safety regulations when handling chemicals				
The product has not been classified and labelled in accordance with EC Directives / relevant national laws.				
Special designation of certain preparations:				
Cyanocrylate - Danger! Bonds skin and eyelids within seconds. Should be kept out of children's reach.				
National regulations				
Classification according to VbF: A III				
Water hazard class:				
Water hazard class O (Self-assessment): generally not hazardous for water				
16. Other Information				
These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.				
Department issuing data specification sheet:				
Contact: Mr John Quinn Technical Director Date of last revision: 24/08/99				
			TDS 51	HSS 51