

The following information is provided as a general guide to our normal manufacturing parameters, and should not be seen as absolute limits of our processes.

Our service

We are always pleased to discuss any customer's specialised requirements. Our Technical Services Department can help you with many aspects of material selection and high frequency applications, as well as helping you to develop prototypes.

PCB types

- Single-sided
- Double-sided
- Double-sided, through-hole plated
- Flexibles
- Multilayer
- Flex/rigid

Substrates:

- PTFE
- FR4
- Polyimide
- Polyester
- LCP
- FOAM

Finishes (ROHS Compliant)

- Immersion tin
- Immersion silver
- OSP
- Hot air solder level (lead free)
- Hard gold
- Electroless nickel immersion gold (ENIG)
- Electroless nickel/palladium immersion gold (ENEPIG)
- Autocatalytic silver immersion gold (ASIG)

Solder Masks

We can offer all standard solder masks, photoimageable or UV curing

Trackslip®

We have developed and patented a PTFE-loaded solder resist specifically for use on phase shifters for variable electrical tilt (VET) antennas

Inspection

- 100% visual inspection to IPC-6018 (Microwave/ RF products)
- 100% visual inspection to IPC-A-600 (digital/ analogue products)
- Electronic Test ("roving probe" and "bed-of-nails", as appropriate, optional)

Quality approval

- AS9100C
- BS EN ISO 9001: 2008
- BS EN ISO 14001: 2004
- SC21
- Cyber Essentials Plus

Manufacturing Parameters

- Minimum track - 0.025mm (0.001")
- Minimum gap - 0.025mm (0.001")
- Minimum drill - 0.3 mm (0.012") (finished, after plating)
- Maximum panel size - 610mm x 457mm (24" x 18") (DSPTH, Multilayer)
- Maximum panel size - 2800mm x 610mm (110" x 24") (DSNPHT)
- Maximum PCB thickness - 6.35mm (0.25")

Flex PCB Manufacturing Parameters

- Flexible multilayer PCBs of any length (>8m, 300 inches)
- 70 - 80% weight reduction over conventional harness technology

Staying current

We go to great lengths to ensure that we are aware of the latest developments in the field of microwave laminates - new products, latest prices etc. Please see our Microwave Laminates knowledge base at www.trackwise.co.uk for full details of available materials.

	Production	Development
Copper = Base + Plating		
Copper 1.5oz		
Min Track	150 μ	<150 μ
Min Gap	150 μ	<150 μ
Tolerance	+/-20 μ	<20 μ
Copper 1oz		
Min Track	100 μ	<100 μ
Min Gap	100 μ	<100 μ
Tolerance	+/-20 μ	<20 μ
Copper 0.5oz		
Min Track	100 μ	<75 μ
Min Gap	100 μ	<75 μ
Tolerance	+/-20 μ	<10 μ
Material 1.60mm max [Plated]		
Min DHS PTH	0.20mm	0.1mm
Max DHS PTH	4.00mm	Please contact us to discuss requirements.
Tolerance	\pm 0.05mm	Please contact us to discuss requirements.
Material 1.60mm max [Non-plated]		
Min DHS NPTH	0.20mm	0.1mm
Max DHS NPTH	N/A	N/A
Tolerance	\pm 0.05mm	N/A
Annular ring		
Min Annular ring	100 μ	<50 μ
Profile		
Min Dia Router	0.5mm	N/A
Copper to profile	100 μ	<50 μ
Profile tolerance	\pm 0.10mm	< \pm 0.10mm
Panel		
Min Panel thickness	<0.15mm	<0.025mm
Max Panel thickness	4.00mm	6.00mm
Max Copper weight	3oz	Please contact us to discuss requirements.
Max Panel size - PTH	610mm x 457mm	2400mm
Max Panel size - NPTH	2800mm x 610mm	For longer, please contact us to discuss requirements.
Flexible multilayer (IHT)	Length unlimited. Please contact us to discuss requirements.	
UV Resist		
Min Resist clearance	300 μ	N/A
Min Resist solder dam	300 μ	Please contact us to discuss requirements.
Photo Resist		
Min Resist clearance	100 μ	Please contact us to discuss requirements.
Min Resist solder dam	100 μ	75 μ
Legend		
Min clearance	300 μ	N/A
Min line width	125 μ	N/A
BBT		
Voltage, V	200	500
Continuity, Ω	<5	N/A
Isolation, M Ω	>20	100
Finishes		
Immersion tin	0.7-1.4 μ excl intermetallic	N/A
Immersion silver	0.14-0.22 μ	N/A
HASL	2-50 μ	2-25 μ
LFHASL	2-50 μ	2-25 μ
OSP	0.3 μ	N/A
Anti-tarnish	Humiseal acrylic	N/A
ENIG	3-5 μ Ni / 0.05-0.1 μ Au	N/A
Hard gold	Please contact us to discuss requirements.	
ASIG - silver/gold	Please contact us to discuss requirements.	
ENEPIG	Please contact us to discuss requirements.	