

Vorschlag

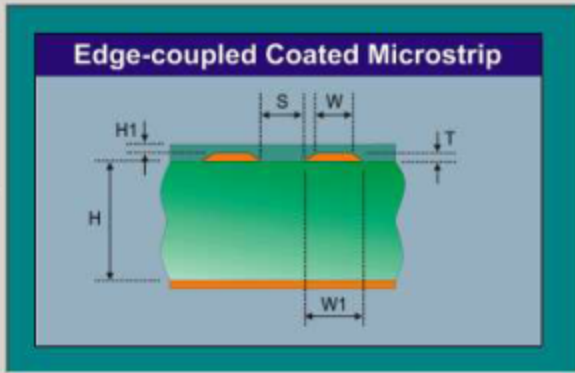
31.01.2023

FDOR_2-9485-01 Lagenaufbau:

```
1 ----- Cu-Foil 9+35 :End-Cu 44
          Imp/Diff.Pair
xxxxxxxxxxxxxxxxxxxxx Prepreg 106 R1755 58 :55
xxxxxxxxxxxxxxxxxxxxx Prepreg 1080R1755LR 74 :70
2 ----- #PWR/GND
##### Core 200 35/35 :270 FR4
3 ----- Imp/Diff.Pair
xxxxxxxxxxxxxxxxxxxxx Prepreg 2116R1755HR 122 :115
xxxxxxxxxxxxxxxxxxxxx Prepreg 2116R1755HR 122 :115
4 ----- #PWR/GND
##### Core 200 35/35 :270 FR4
5 ----- #PWR/Power
xxxxxxxxxxxxxxxxxxxxx Prepreg 2116R1755HR 122 :115
xxxxxxxxxxxxxxxxxxxxx Prepreg 2116R1755HR 122 :115
6 ----- Signale
##### Core 200 35/35 :270 FR4
7 ----- #PWR/Power
xxxxxxxxxxxxxxxxxxxxx Prepreg 1080R1755LR 74 :70
xxxxxxxxxxxxxxxxxxxxx Prepreg 106 R1755 58 :55
          Imp/Diff.Pair
8 ----- Cu-Foil 9+35 :End-Cu 44
```

Lagen: 8 Dicke: 1,57 +/- 0,13

- Edge-coupled Surface Microstrip
- Edge-coupled Coated Microstrip
- Edge-coupled Embedded Microstrip
- Edge-coupled Symmetrical Stripline
- Edge-coupled Offset Stripline
- Broadside-coupled Stripline



Height	H	130	Calculate
Height1	H1	10	Calculate
Width	W	110	Calculate
Width1	W1	130	Calculate
Separation	S	130	Calculate
Thickness	T	42	Calculate
Dielectric	Er	3.7	Calculate
Diff. Impedance	Zo	98.38	Calculate
			More...

Notes

desy 100 L1

Units

- ☐ Mils
- ☐ Inches
- ☒ Microns
- ☐ Millimetres



Design and Test Tools for
Controlled Impedance
and Signal Integrity

Edge-coupled Surface Microstrip



Edge-coupled Coaxial Microstrip



Edge-coupled Embedded Microstrip



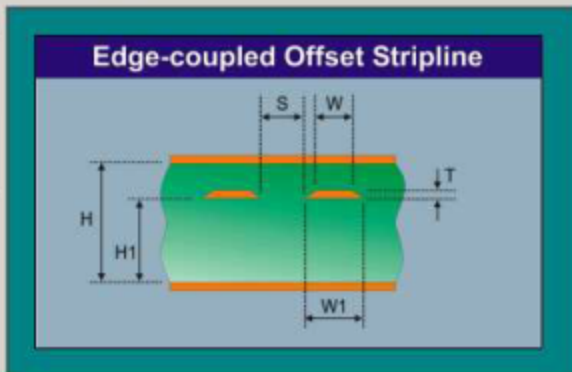
Edge-coupled Symmetrical Stripline



Edge-coupled Offset Stripline



Broadside-coupled Stripline



Notes

desy 100 inner

Units

- ☐ Mils
☐ Inches
☒ Microns
☐ Millimetres

Height	H	460	Calculate
Height1	H1	200	Calculate
Width	W	110	Calculate
Width1	W1	120	Calculate
Separation	S	140	Calculate
Thickness	T	33	Calculate
Dielectric	Er	3.7	Calculate
Diff. Impedance	Zo	96.77	Calculate
			More...

Design and Test Tools for
Controlled Impedance
and Signal Integrity

[Embedded Resistors](#)
[PPM Calculator](#)
[Crosstalk Calculator](#)
[Wavelength Calculator](#)
[Er Effective](#)
[Ohm's Law](#)
[Reactance](#)

[Conductor Spacing](#)
[Conductor Impedance](#)
[Conversion Data](#)
[Planar Inductors](#)
[Plane Calculator](#)
[Thermal](#)
[Fusing Current](#)

[Via Properties](#)
[Conductor Properties](#)
[Bandwidth & Max Conductor Length](#)
[Differential Pairs](#)
[Padstack Calculator](#)
[Mechanical Information](#)

Differential Pairs

Conductor Width (W)

0,13 mm

Target Zdiff

120 Ohms

Formula Restrictions:

0.1 < W/H < 3.0
0.1 < S/H < 3.0

Conductor Spacing (S)

0,30 mm

Conductor Height (H)

0,130 mm

W/H = 1.000

S/H = 2.308

Zdifferential

120.992 Ohms

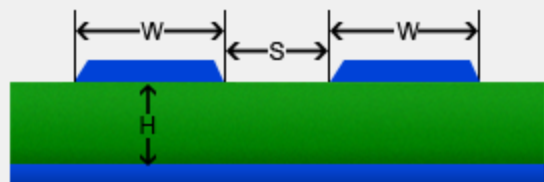
Zo

63.839 Ohms

+/- Tolerance = 10%

133.091 Ohms

108.892 Ohms



Options

Base Copper Weight

- ☒ 9um
- ☐ 18um
- ☐ 35um
- ☐ 53um
- ☐ 70um
- ☐ 88um
- ☐ 106um
- ☐ 142um
- ☐ 178um

Units

- ☐ Imperial
- ☒ Metric

Substrate Options

Material Selection

Custom

Er

3,7

Tg (°C)

130

Temp Rise (°C)

20

Temp in (°F) = 36.0

Ambient Temp (°C)

22

Temp in (°F) = 71.6

Plating Thickness

- ☐ Bare PCB
- ☐ 18um
- ☒ 35um
- ☐ 53um
- ☐ 70um
- ☐ 88um
- ☐ 106um

Differential Layer

- ☒ Edge Cpld Ext
- ☐ Edge Cpld Int Sym
- ☐ Edge Cpld Int Asym
- ☐ Edge Cpld Embed
- ☐ Broad Cpld Shld
- ☐ Broad Cpld NShld

Print

Solve!

Information

Total Copper Thickness
44 um

Via Thermal Resistance
N/A

Via Count: **10**

Conductor Temperature

Temp in (°C) = N/A

Temp in (°F) = N/A

N/A

Via Voltage Drop

N/A

Conductor Spacing Conductor Impedance Conversion Data Planar Inductors Plane Calculator Thermal Fusing Current
 Embedded Resistors PPM Calculator Crosstalk Calculator Wavelength Calculator Er Effective Ohm's Law Reactance
 Via Properties Conductor Properties Bandwidth & Max Conductor Length Differential Pairs Padstack Calculator Mechanical Information

Differential Pairs

Conductor Width (W)

0,13 mm

Target Zdiff

150 Ohms

Formula Restrictions:

$0.1 < W/H < 3.0$
 $0.1 < S/H < 3.0$

Conductor Spacing (S)

0,23 mm

Conductor Height (H)

0,360 mm

W/H = 0.361

S/H = 0.639

Zdifferential

152.512 Ohms

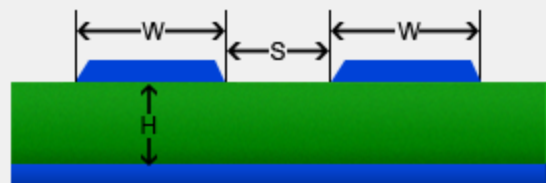
Zo

103.040 Ohms

+/- Tolerance = 10%

167.763 Ohms

137.261 Ohms



Options

Base Copper Weight

- ☒ 9um
- ☐ 18um
- ☐ 35um
- ☐ 53um
- ☐ 70um
- ☐ 88um
- ☐ 106um
- ☐ 142um
- ☐ 178um

Plating Thickness

- ☐ Bare PCB
- ☐ 18um
- ☒ 35um
- ☐ 53um
- ☐ 70um
- ☐ 88um
- ☐ 106um

Differential Layer

- ☒ Edge Cpld Ext
- ☐ Edge Cpld Int Sym
- ☐ Edge Cpld Int Asym
- ☐ Edge Cpld Embed
- ☐ Broad Cpld Shld
- ☐ Broad Cpld NShld

Information

Total Copper Thickness
44 um

Conductor Temperature
 Temp in (°C) = N/A
 Temp in (°F) = N/A

Units

- ☐ Imperial
- ☒ Metric

Substrate Options

Material Selection

FR-4 STD

Er

3,7

Tg (°C)

130

Temp Rise (°C)

20

Temp in (°F) = 36.0

Ambient Temp (°C)

22

Temp in (°F) = 71.6

Print

Solve!