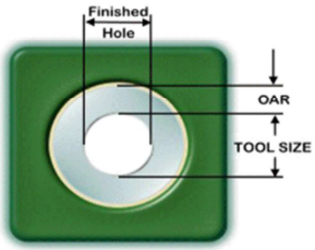
Normes Euro-circuit

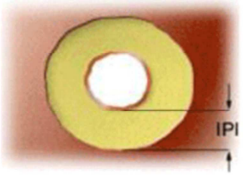
Eurocircuits - PCB Design Classification Overview

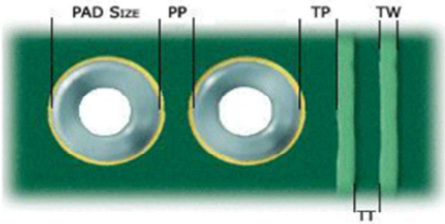
Pattern Class	class 3		class 4		class 5		class 6		class 7		class 8		class 9		class 10		
Service	N+P+S+B+RF+SF+I		N+P+S+B+RF+SF+I		N+P+S+B+RF+SF+I		N+P+S+B+RF+SF+I		S+RF		S+RF		S+RF		-		
OTW	0.250	10	0.200	8	0.175	7	0.150	6	0.125	5	0.100	4	0.090	3.5	<0.090	<3.5	mm-mil
OTT-OTP-OPP	0.250	10	0.200	8	0.175	7	0.150	6	0.125	5	0.100	4	0.090	3.5	<0.090	<3.5	mm-mil
OAR	0.200	8	0.150	6	0.150	6	0.125	5	0.125	5	0.100	4	0.100	4	<0.100	<4	mm-mil
ITW	0.250	10	0.200	8	0.175	7	0.150	6	0.125	5	0.100	4	0.090	3.5	<0.090	<3.5	mm-mil
ITT-ITP-IPP	0.250	10	0.200	8	0.175	7	0.150	6	0.125	5	0.100	4	0.090	3.5	<0.090	<3.5	mm-mil
IAR	0.200	8	0.150	6	0.150	6	0.125	5	0.125	5	0.125	5	0.125	5	<0.125	<5	mm-mil
IPI	0.275	11	0.225	9	0.225	9	0.200	8	0.200	8	0.200	8	0.200	8	<0.200	<8	mm-mil

The smallest value (OTW, OTT-OTP-OPP, OAR, ITW, ITT-ITP-IPP, IAR, IPI) determines the **Pattern Class** of the board

Base Cu		min Pattern Values				
Base Cu OL		OTT-OTP-OPP		OTW		
12µm	⅓oz	0.090	3.5	0.090	3.5	mm-mil
18µm	½oz	0.100	4	0.090	3.5	mm-mil
35µm	1oz	0.125	5	0.125	5	mm-mil
70µm	2oz	0.200	8	0.200	8	mm-mil
105µm	3oz	0.250	10	0.250	10	mm-mil
Base Cu IL		ITT-ITP-IPP		ITW		
12µm	⅓oz	0.090	3.5	0.090	3.5	mm-mil
18µm	½oz	0.100	4	0.090	3.5	mm-mil
35µm	1oz	0.125	5	0.125	5	mm-mil
70µm	2oz	0.200	8	0.200	8	mm-mil
105µm	3oz	0.250	10	0.250	10	mm-mil





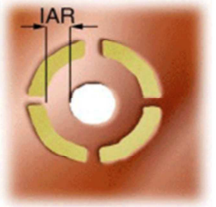


Preceding letters **O** and **I** stand for Outer- and Inner layer
Example: **OTW** = **O**uter layer **T**rack **W**idth

OAR : smallest **OAR** (Outer layer Annular Ring = 1/2 (Outer layer pad diameter - **TOOLSIZE**))
IAR : smallest **IAR** (Inner layer Annular Ring = 1/2 (Inner layer pad diameter - **TOOLSIZE**))
IPI (**I**nner layer **P**ad **I**nsulation) : Clearance between edge **TOOLSIZE** of any unconnected hole(PTH/NPTH) and any nearest copper

Smallest **TOOLSIZE** = Finished Hole Size + 0.10mm/4mil for **P**lated **T**hrough **H**oles
+ 0.00mm/0mil for **N**on **P**lated **T**hrough **H**oles

Drill Class	class A		class B		class C		class D		class E		class F		
Service	N+P+S+B+RF+SF+I		N+P+S+B+RF+SF		N+P+S+B+RF+SF		S+RF		S+RF		-		
min TOOLSIZE	0.60	0.026	0.45	0.018	0.35	0.014	0.25	0.010	0.20	0.008	<0.20	<0.008	mm-inch
Corresponding finished holes sizes													
PTH	0.50	0.022	0.35	0.014	0.25	0.010	0.15	0.006	0.10	0.004	<0.10	<0.004	mm-inch
NPTH	0.60	0.026	0.45	0.018	0.35	0.014	0.25	0.010	0.20	0.008	<0.20	<0.008	mm-inch



The smallest value (**TOOLSIZE**) determines the **Drill Class** of the PCB

Max. PCB Thickness to Drill Class	3.20	0.125	3.20	0.125	2.40	0.093	2.00	0.079	1.60	0.062	mm-inch	Aspect ratio is 1 / 8

Note A: VIA holes are Plated Through Holes, default defined as <=0.45mm (18mil) for all services or <= as defined by the customer in the order details.
VIA holes have a maximum negative tolerance of 0.30mm (12mil)
Note B: This classification table can only be put into praxis on PCB designs that have a **Plating Index of 0.40 or higher.** This is calculated in the PCB Visualizer analysis and displayed in the PCB Visualizer order details.

Services Index : **N** = NAKED proto **P** = PCB proto **S** = STANDARD pool **B** = BINDI pool **RF** = RF pool **SF** = SEMI-FLEX pool **I** = IMS pool

Normes : 6C