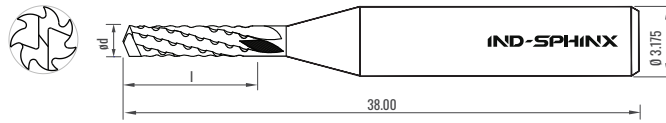


- IMS PCB Ceramic Layer
- FR4 High Tg ≥ 170
- FR4 Ceramic Fillers
- Halogen Free Laminates
- FR4 Normal Tg



- Up Cut
- Drill Point
- Chip Breaker



APPLICATION

Routing of inner and outer contours

Depaneling of assembled PCBs

Suitable for Halogen free, High Tg material $\geq 170^{\circ}\text{C}$ and laminates with fillers

| ød DIAMETER | | l FLUTE LENGTH | | mm |
|-------------|--|----------------|-------------|----|
| 0.80 | | 5.20 | - | |
| 0.90 | | 5.20 | - | |
| 1.00 | | 5.20 | 6.50 / 7.50 | |
| 1.10 | | 6.50 | - | |
| 1.20 | | 7.00 | - | |
| 1.40 | | 7.00 | - | |
| 1.50 | | 7.50 | 8.50 * | |
| 1.60 | | 7.50 | 8.50 * | |
| 1.80 | | 9.00 | - | |
| 2.00 | | 9.00 | - | |
| 2.40 | | 9.00 | - | |
| 2.50 | | 9.00 | - | |
| 3.00 | | 10.00 | - | |

On request Inch / Special dimensions / Shank 3.00mm

* : Non stock items / Articles

FEATURES & BENEFITS

High hardness - 10000 HV

Extreme wear resistance

High heat conductance

Reduce friction - smooth chip flow

High dimensional accuracy- improved process capability

Drill point end geometry reducing the cycle time of PCB routing process

| RECOMMENDED PARAMETERS FOR ROUTING | | | | | | |
|------------------------------------|-------|--------|-------|------------------|---------------|--------------------|
| Ød | N | f | F x-y | Fz (Pre Drilled) | Routing Depth | Depth in to Backup |
| mm | RPM | µm/rev | m/min | m/min | m/min | |
| 0.80 | 71000 | 5.0 | 0.40 | 1.5 | 3.20 | 0.8 |
| 0.90 | 71000 | 5.0 | 0.40 | 1.5 | 3.20 | 0.8 |
| 1.00 | 61000 | 7.0 | 0.50 | 1.5 | 3.20 | 0.8 |
| 1.10 | 48000 | 11.0 | 0.50 | 1.5 | 3.20 | 1.1 |
| 1.20 | 48000 | 11.0 | 0.50 | 1.5 | 3.20 | 1.1 |
| 1.40 | 40000 | 11.0 | 0.50 | 1.5 | 3.20 | 1.1 |
| 1.50 | 38000 | 16.0 | 0.60 | 2.0 | 4.80 | 1.1 |
| 1.60 | 36000 | 20.0 | 0.70 | 2.0 | 4.80 | 1.1 |
| 1.80 | 32000 | 26.0 | 0.80 | 2.0 | 4.80 | 1.1 |
| 2.00 | 29000 | 35.0 | 1.00 | 2.0 | 4.80 | 1.5 |
| 2.40 | 24000 | 45.0 | 1.10 | 2.0 | 4.80 | 1.5 |
| 2.50 | 22900 | 48.0 | 1.10 | 2.0 | 4.80 | 1.5 |
| 3.00 | 19000 | 52.0 | 1.00 | 2.0 | 4.80 | 1.5 |

ød Tool Diameter N Spindle Speed f Chip Load F x-y Table Feed F z Z-Feed Rate

Tabulated parameters provide guidelines which acts as starting points for optimising speeds and feeds at the user's end.

REMARKS

- Entry point should be pre drilled.
- Backup board should be pre routed.
- Ensure vacuum pressure ≥ 80 mbar.

PACKING

- 10 tools per pack
- 50 tools per pack



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