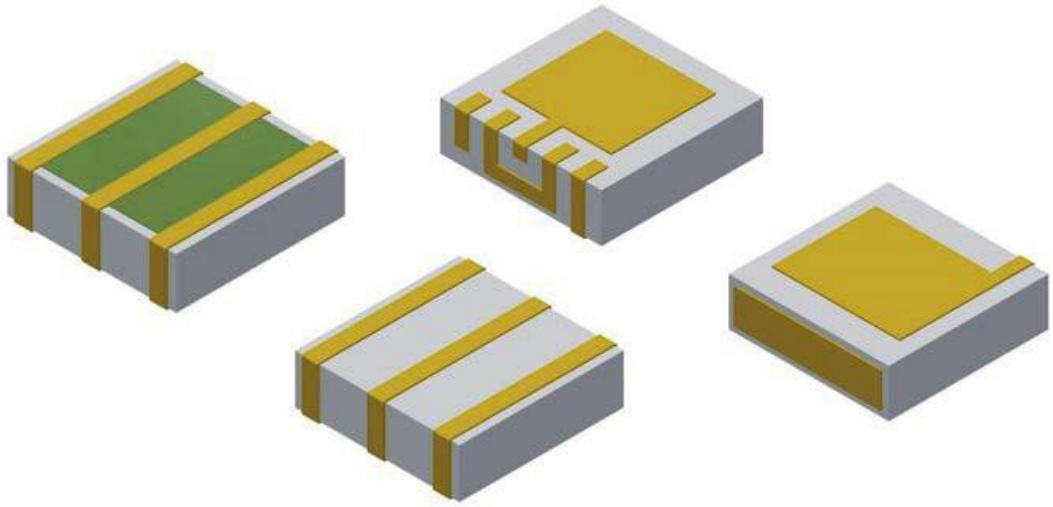
Side Wall Patterning - Custom Substrate



CAPABILITIES

- Conductor patterning on 4 surfaces
- Wire-bondable or solderable metalizations
- Allows attachment to side wall of substrate
- Tight dimensional tolerances

APPLICATIONS

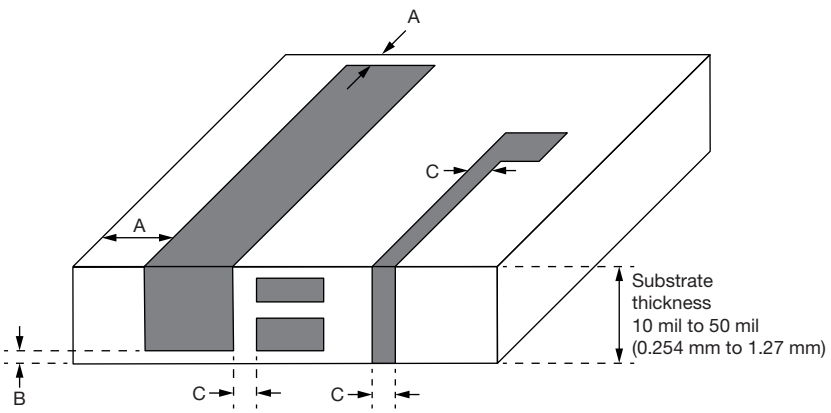
- Electro-mechanical or electro-optical applications that require an interface between the electric circuit and an element such as a mirror, lens, fiber, etc.
- High frequency circuits such as RF application, and high bit rate transceivers (TOSA / ROSA) that benefit by replacing wire bonds with side-patterned traces
- Applications that require a high degree of miniaturization

DESIGN SPECIFICATIONS AND RULES

- Substrate materials: alumina or AlN. Sidewall patterning can be deposited on plates ranging between 10 mils and 50 mils. Polished plates are preferred due to their tighter thickness tolerance.
- Metalization: TiW / Au, TiW / Ni / Au or TiW / Pd / Au as well as resistor and AuSn metalization available.
- Lines and gaps: lines and gaps down to 0.003" (75 microns) can be patterned on the component sidewalls.
- Pullback from bottom edge: traces designed to reach the bottom edge of the sidewall will requires a ± 2 mil tolerance. Positive tolerance represents a gap from the bottom edge; negative tolerance represents metal wrapping around edge to the rear surface.
- Geometric tolerances down to ± 1 mil (± 25 µm) can be maintained on sidewall geometries. Tolerances between metal on diced edges of the ceramic tile down to ± 2 mil.
- Connectivity: side wall patterns can be isolated (standalone), connected to front side only (half wrap) or connected to both front and rear sides (full wrap).
- Component with sidewall patterning can have integrated resistors or AuSn solder pads embedded on the front or rear surfaces. These capabilities are not allowed on the sidewall itself.

DESIGN SPECIFICATIONS	
Plate Thickness	0.010" to 0.050"
Minimum Gap	0.003"
Dimensional Tolerance	± 0.001"
Metal Pattern to Diced Edge Tolerance	≥ 0.002"
Metal Systems	TiW / Au / Au plate or TiW / Pd / Au
	TiW / Au / Ni plate / Au plate
	TaN / TiW / Au or NiCr / TiW / Au
	80 / 20 AuSn pads available, consult factory

SIDE WALL PATTERNING DESIGN RULES



A	B	C
Best alignment of metal to diced edges ± 0.002" (± 50 µm)	Metal pullback from bottom edge Typical: 0.002" ± 0.002" (50 µm ± 50 µm) or 0" ± 0.002" (0 µm ± 50 µm) Negative values wrap to rear side.	Line or gap 0.003" (75 µm) min. Typical tolerance: ± 0.002" (± 50 µm) Tight tolerance to ± 0.001" (± 25 µm) allowed in some cases

CONTACT INFORMATION

For design assistance, contact: efi@vishay.com

GLOBAL PART NUMBER INFORMATION

Global Part Numbering example: SDWP20xxxx-00Q

S	D	W	P	2	0					-	0	0	Q
Model				Sequential: assigned by factory						Internal revision			

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