

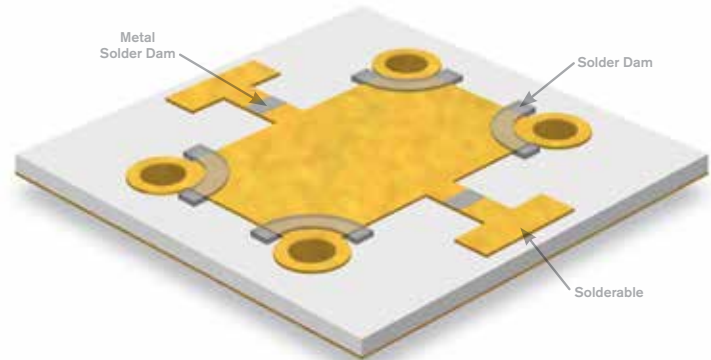
Solder Dams

Polyimide Solder Dams

Polyimide can also be used as a braze stop or solder dam. This polyimide is photo-definable and is non-conductive. The typical height of the solder dam is 3 to 6 microns.

Metal Solder Dams

Oxidizing metals can also be used as solder dams. The more common metals used for this purpose are TaN, TiW and Ni. The metal solder dam structures are photo-defined. These metals can either be placed on the Au conductor or windows can be opened in the conductor structure to expose these underlying layers.



Polyimide Solder Dam

Tensile Strength	Mpa	215
Young's Modulus	Gpa	2.5
Tensile Elongation	%	85
Glass Transition Temperature	°C	285
Thermal Decomposition Temperature	°C	525
Coefficient of Thermal Expansion	ppm/°C	55
Coating Stress (100 silicon)	MPa	33
Dielectric Constant 1 MHz; 0%/50% RH		3.2/3.3
Dissipation Factor 1 MHz; 0%/50% RH		0.003/0.008
Dielectric Strength	V/μm	345
Moisture Absorption @ 50% RH	%	1.08
Density	g/cc	1.39
Refractive Index @ 633nm		1.69