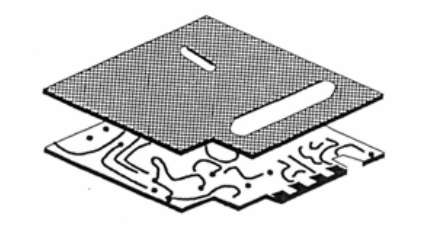
Circuit Board Damper
CBD 19010 Series



The Circuit Board Damper is the judicious combination of a viscoelastic product having a high absorbing capacity, and stressed Epoxy glass layer along with a protective paper film.
This material has been designed in order to significantly reduce the vibrations and shocks that affect electronic boards and any similar structure in most severe operational conditions.
The problem linked to the mechanical environment having been substantially reduced by means of the Circuit Board Damper, we can therefore increase the board density whilst reducing its format, use more sensitive components, remove the stiffners and other mechanical artefacts, whilst still obtaining an increased reliability. His product is manufactured under the form of a sheet, at a format of 863,6 x 558,8 (±3,2) mm with the following thicknesses and references :

19010-1	Thickness 2,1 ± 0,38 mm
19010-19	Thickness 2,5 ± 0,38 mm

For other thicknesses, please consult us

Machining
By water jet cutting or by traditional machining

Positioning
After sizing, just remove the protection sheet and position the CBD so that it covers at least 50% of the circuit surface, one push with the hand is all that is needed to fix it.
The thickness of viscoelastic material should be such as the weldings, the components tails and the surface-mounted components will be "absorbed", thus ensuring a full contact with the circuit. The thickness of some components being greater that the thickness of viscoelastic material, it's then necessary to drill or cut out the CBD in order to able their way trough. We thus obtain an assembly circuit/CBD that is perfectly uniform

Note : We can take care of the machining operations and deliver a product "ready to use"

Bond separation after assembly
In order to avoid any deformation, the board equipped with Circuit Board Damper should be handled on a plane surface
Slightly push with the thumb in order to hold the CBD and slightly pull up, starting from a corner, and continue the operation until full removal is achieved. Remove the viscoelastic residues by means of a brush coated with Trichloroethane or Freon, then dry with compressed air (do not use greasy substances).
However, if the CBD cannot be easily removed, use a Teflon spatula and proceed this way : slightly pull up the CBD starting from a corner, moisten the viscoelastic material with the solvent, wait a few moments and start separating the CBD with the Teflon spatula, repeat the operations as often as necessary.
The operations will be made easier either by cooling (6/8°C) or backing (+50°C) the assembly CBD/Circuit, during approx one hour

Important : The Circuit Board Damper should not be reused

Ed. 01/04

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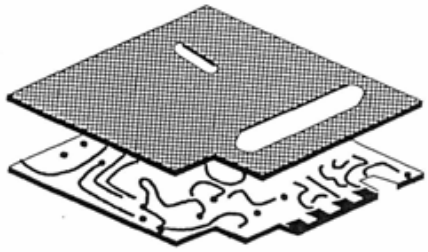


Mechanical properties

Specific gravity	1,09
Thermal expansion	1,75x10^{-4} in/in/°F
Thermal conductivity	0,14 BTU –ft/hr/ft²°F
Shear stress	30 P.S.I.
Operational temperature range	-62°C to +204°C

Is not subject to mould.
Standard MIL E 5272 C

Other characteristics

ASTM D 149 Dielectric force
Measured by ¼" electrodes on 2mm adhesive films in an aluminium basin

Condition A	1500 V/mm
Condition C	1450 V/mm

ASTM D 150 Dielectric constant

10² Hz	Condition A	2,95
	Condition C	3,00
10⁵ Hz	Condition A	2,90
	Condition C	2,95

ASTM D 150 Dissipation factor

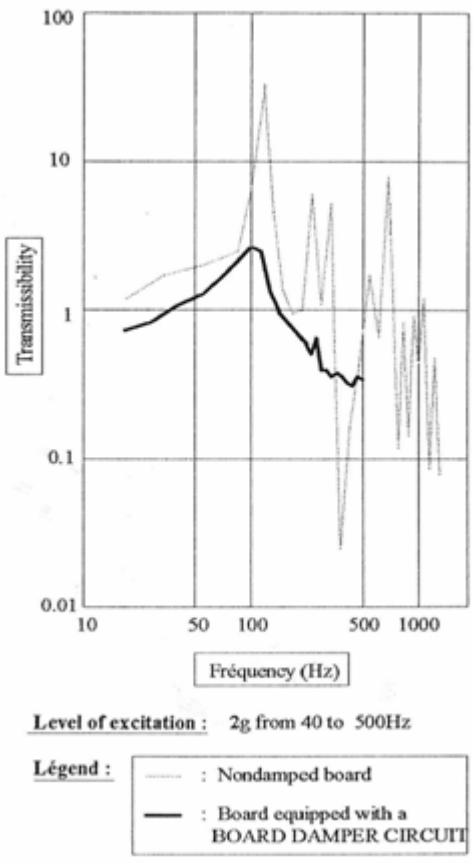
10² Hz	Condition A	0,004
	Condition C	0,005
10⁵ Hz	Condition A	0,003
	Condition C	0,004

ASTM D 257 Resistivity

Condition A	4x10^{13} Ω/cm
Condition C	3x10^{13} Ω/cm

Condition A : 96 hours at 23°C, 50% of relative humidity
Condition C : 96 hours at 23°C, 96% of relative humidity

Average weight : 31 grams / dm²



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