

Application Note AN-1126

Mounting M3G Series Converters

By

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Introduction

The base of the M3G series converters constructed with aluminum-silicon-carbide (AlSiC) particle metal matrix benefit from the low mass, high thermal conductivity, and CTE match to the substrates mounted in them. However, be advised that the AlSiC material is more brittle than the CRS. For this reason, gasket material and its thickness and mounting torque are critical to prevent damage to the mounting tabs and to provide efficient thermal transfer.

The gasket IR recommends is Sil-Pad 2000 made by Bergquist (a low outgassing space grade material). It is 0.010" thick and the shape matches the converter base outline (including the flanges). The M3G series DC-DC converter requires either M3 or 4-40 size screws.

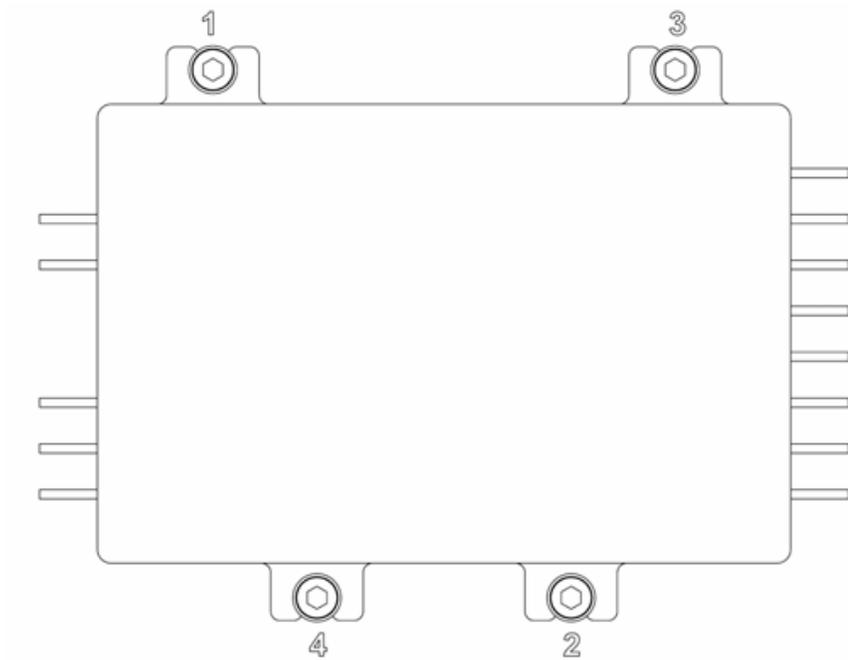
The minimum recommended flatness specification for the surface the converter is mounting to is 0.003" per inch.

Mounting instructions

The procedure for mounting the converter is as follows:

1. Ensure that all surfaces, the base of the converter, gasket, and the mounting plate are free from foreign material, burrs, or anything that may prevent an intimate contact between the converter and mounting plate.
2. Place the gasket on the surface reserved for the converter and line it up with the mounting holes.
3. Place the converter on the gasket and line both up with mounting holes.

4. Install screws using appropriate washers and tighten by hand (~ 4 in-oz) in the sequence shown below:



5. Tighten the screws with appropriate torque driver using a controlled torque of up to 96 in-oz (6 in-lb) in the sequence shown above.