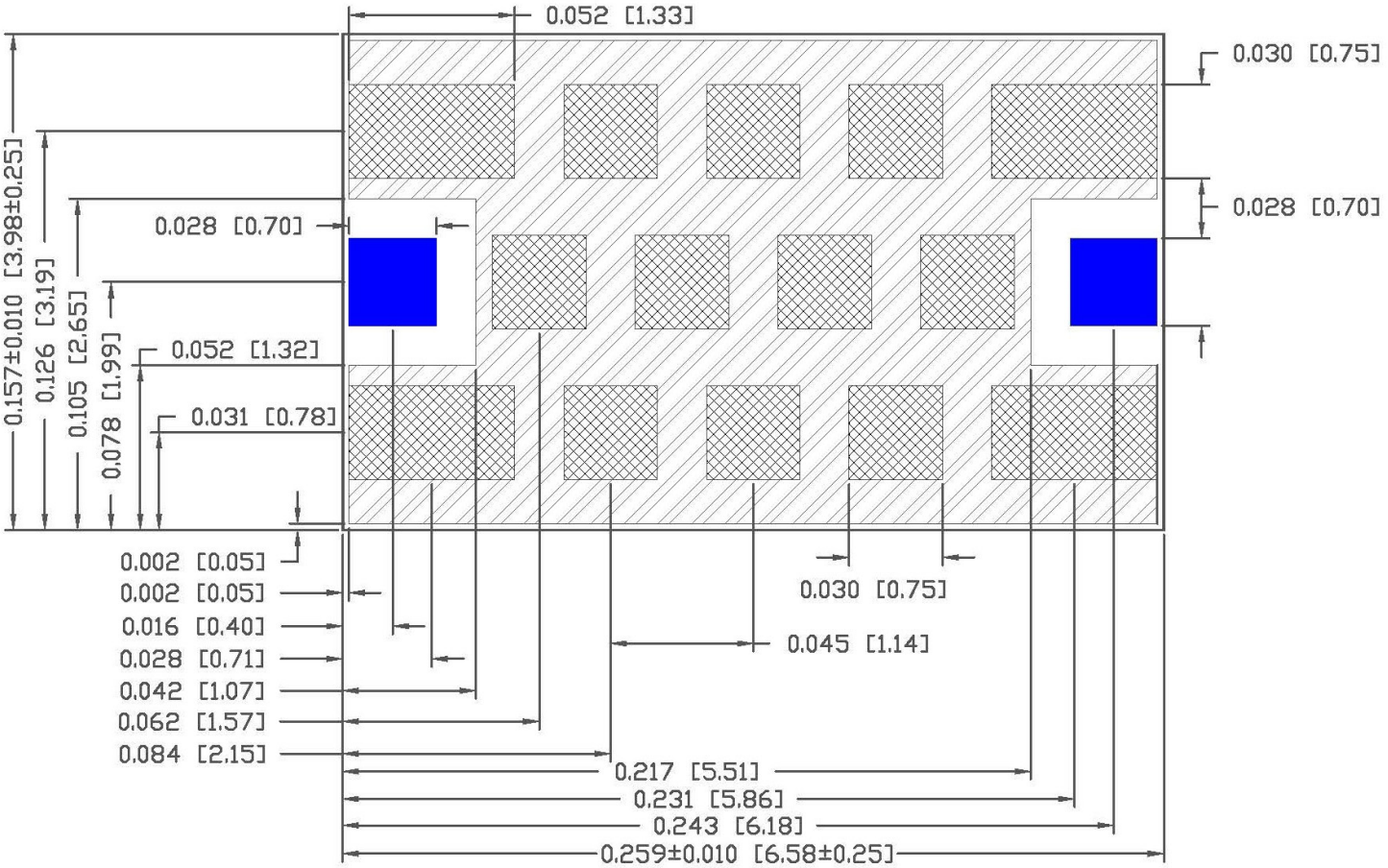
MECHANICAL SPECIFICATIONS



Input / output pads shown in Blue. Grounding pads shown in gray.
Dimensions in inches [mm]
Tolerances are +/-0.002 [0.05], unless noted.
Dimensions nominal unless otherwise noted.
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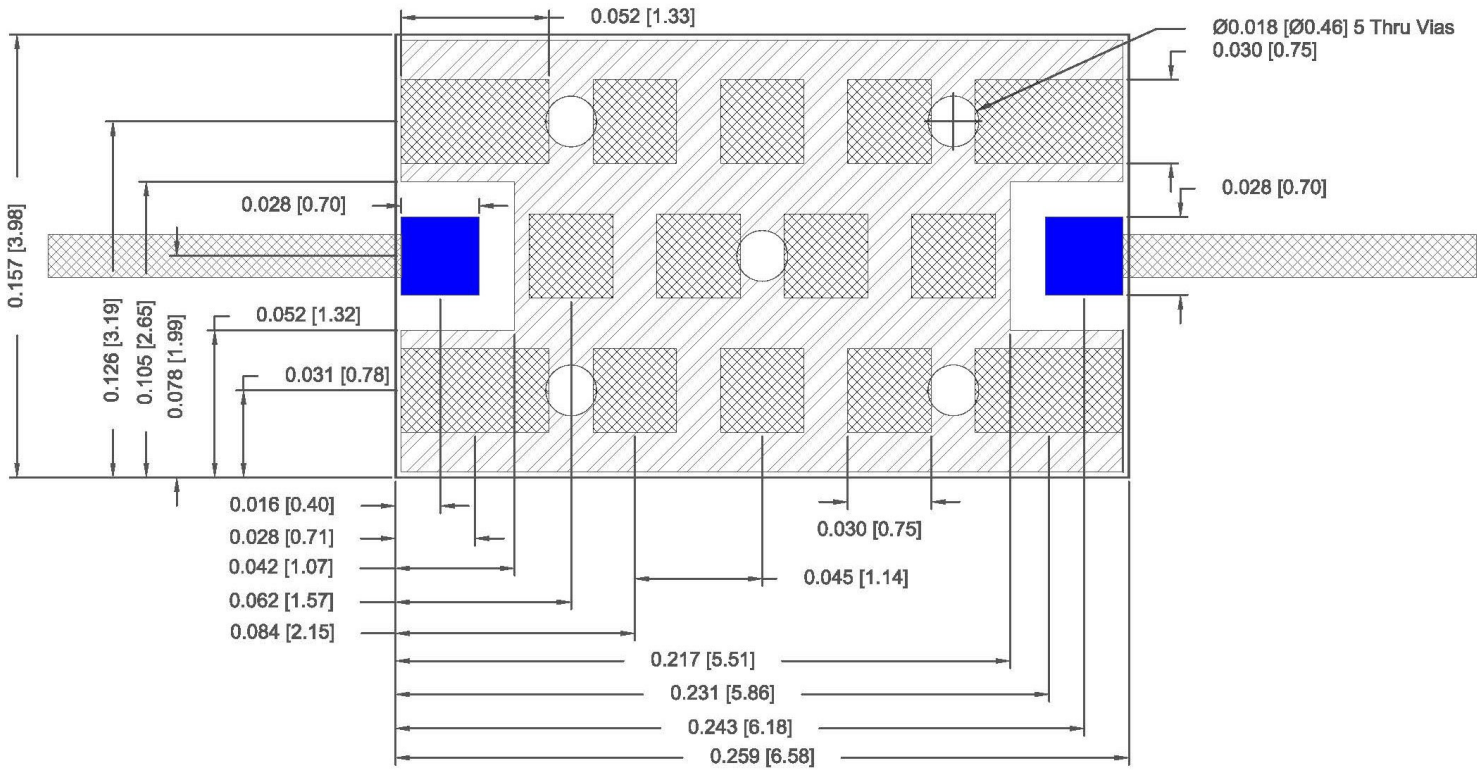
100 mil cavity height above device. Please contact factory if alternate clearance is needed

SUGGESTED PCB LAYOUT



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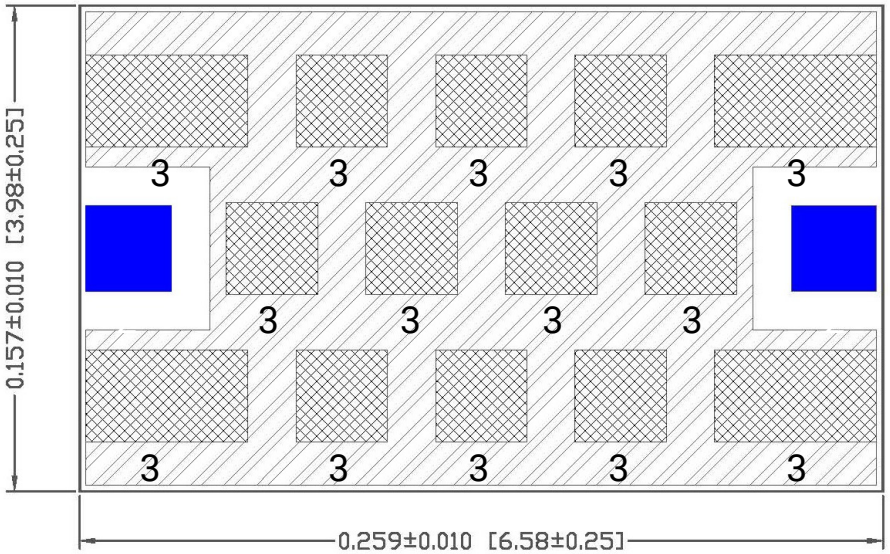

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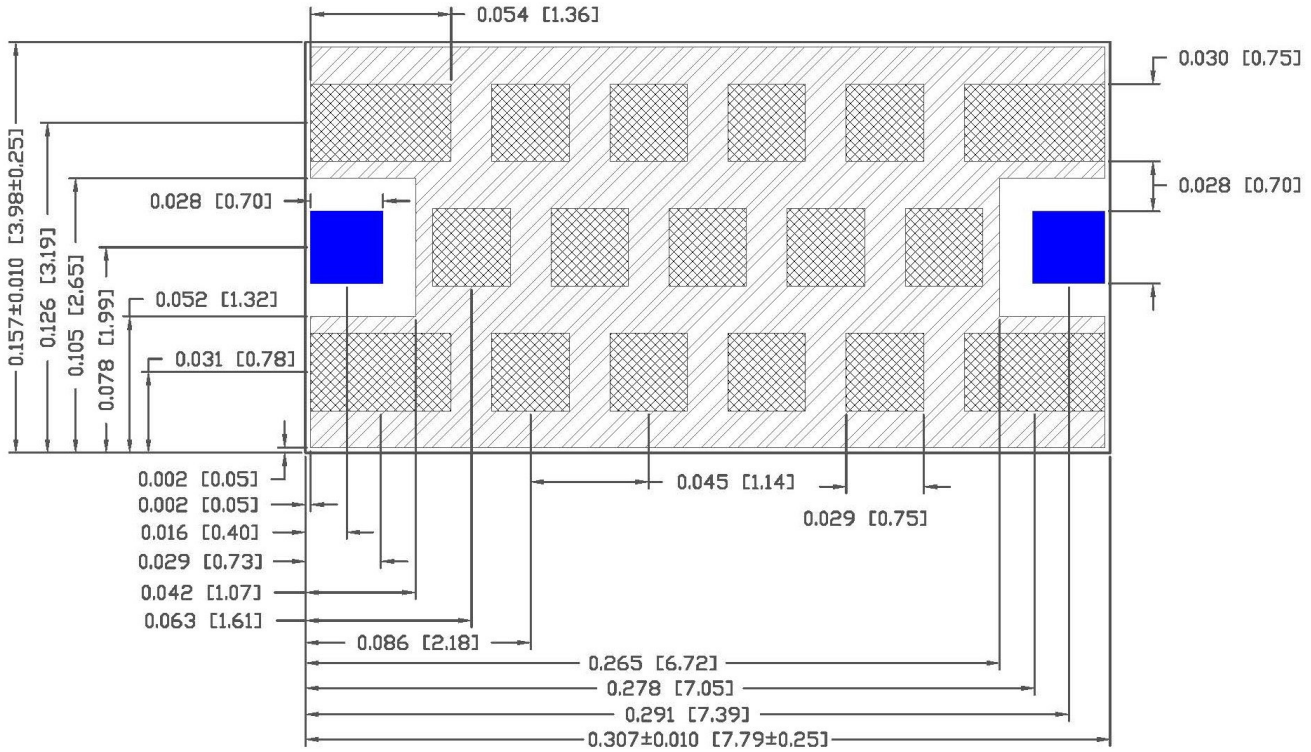

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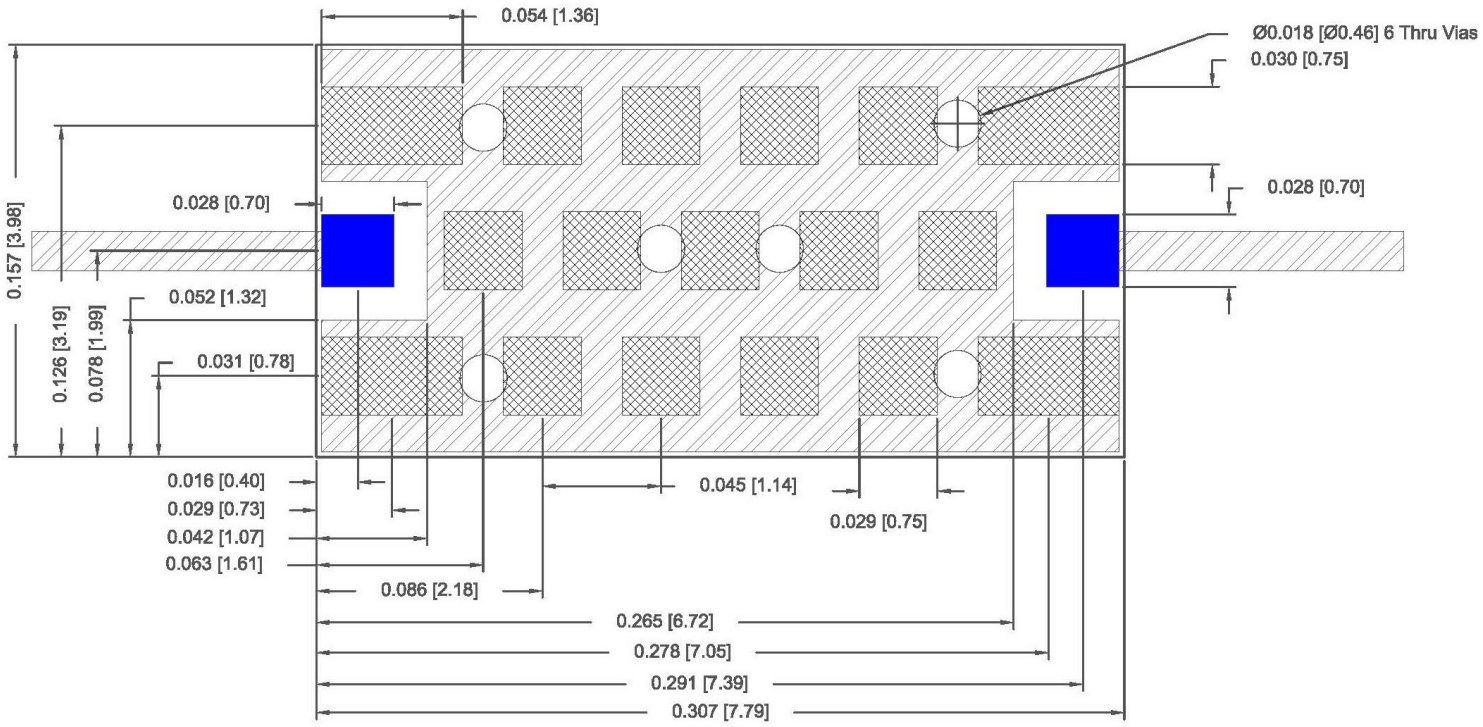

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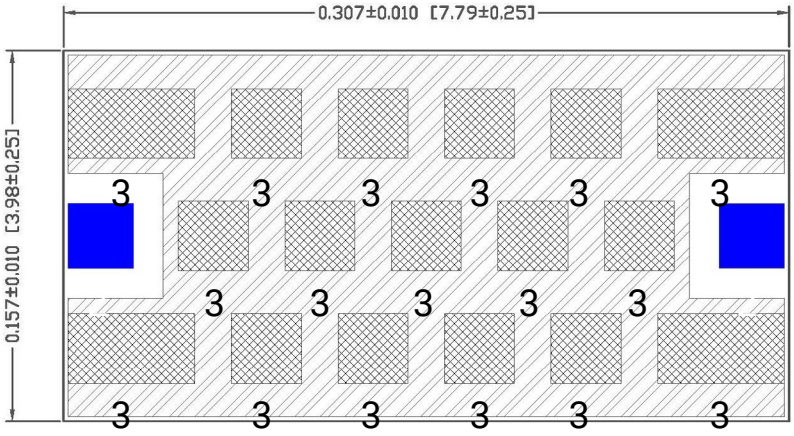

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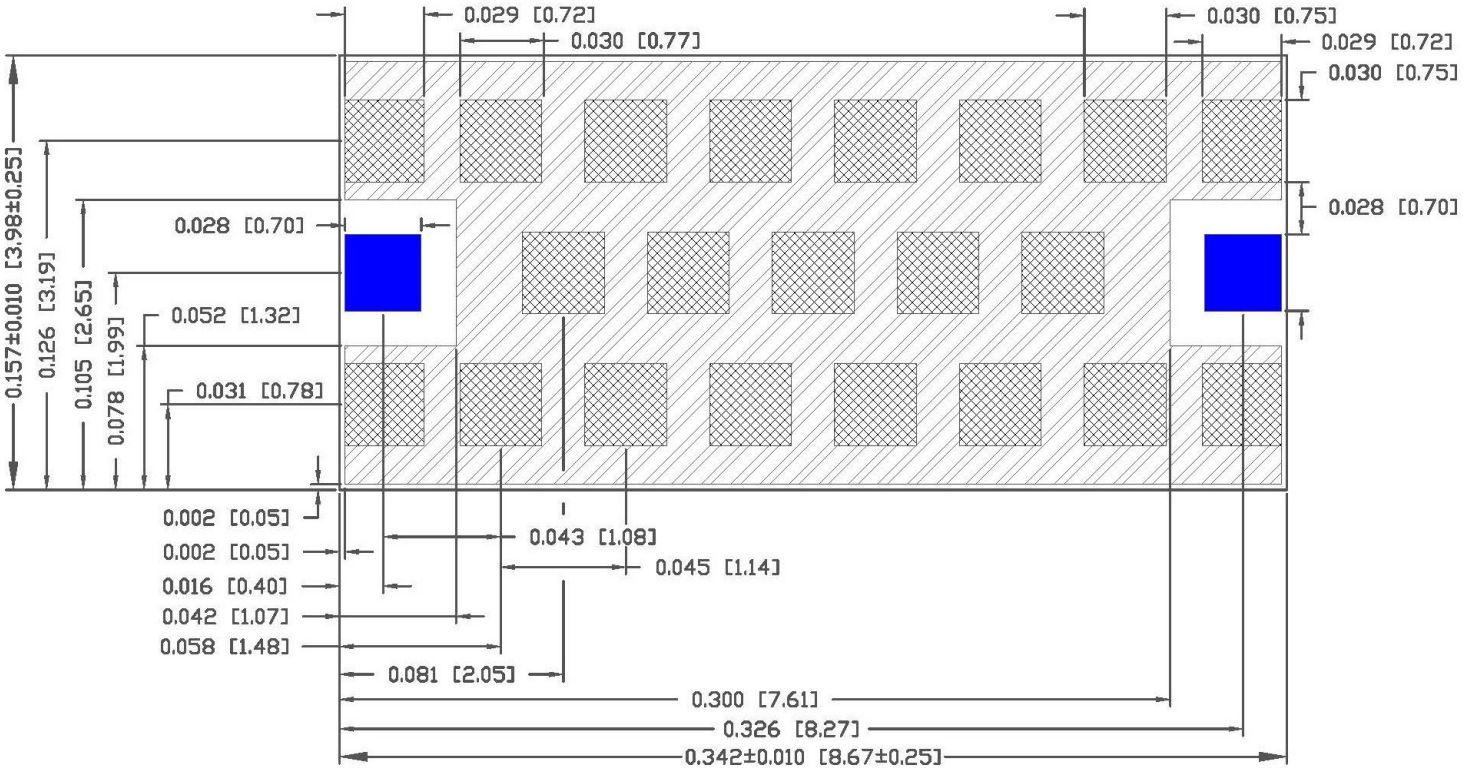

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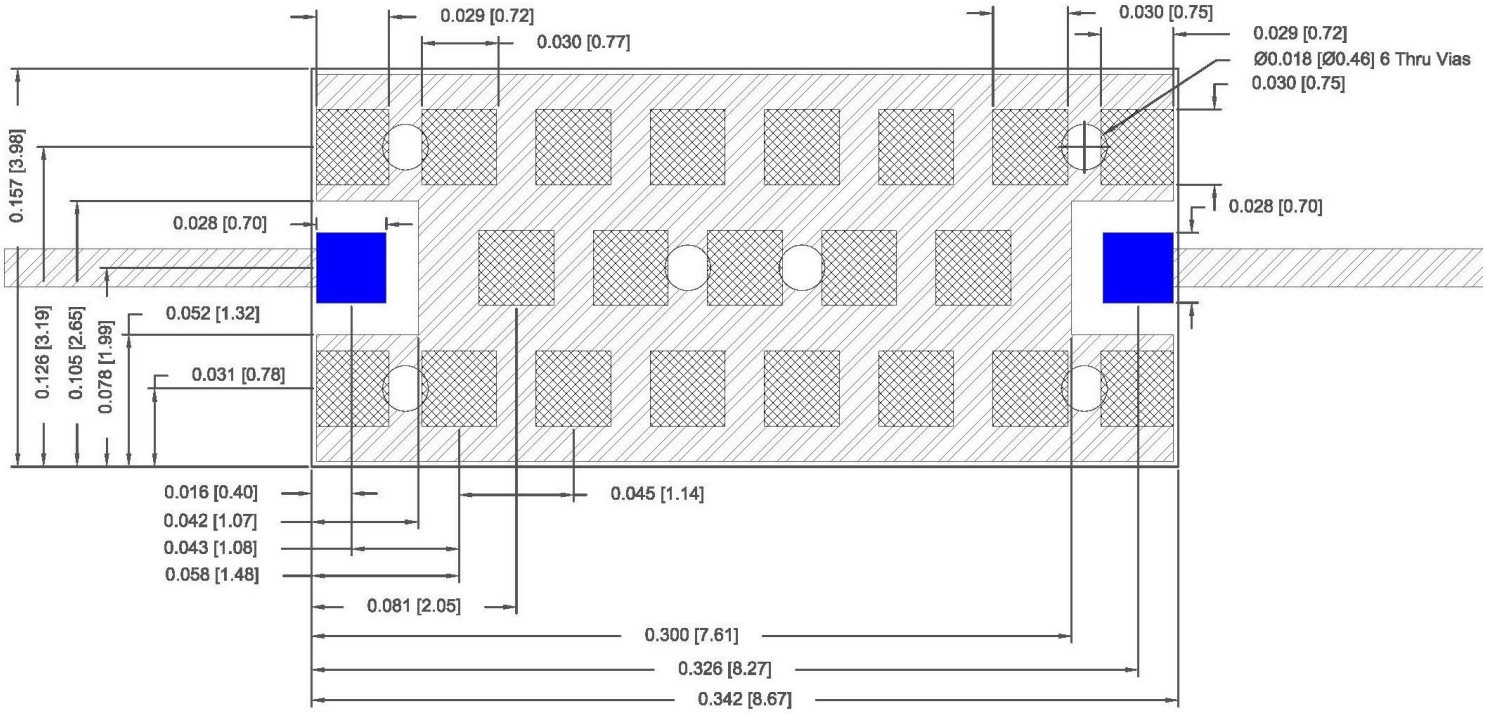

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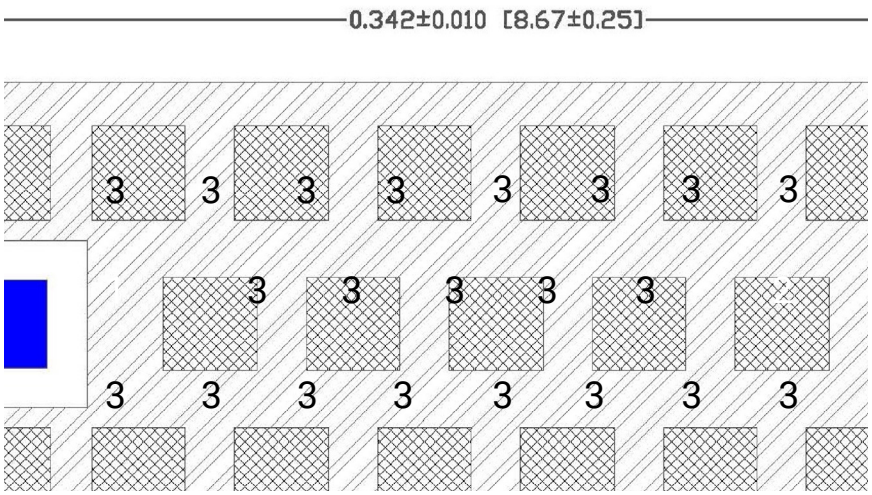

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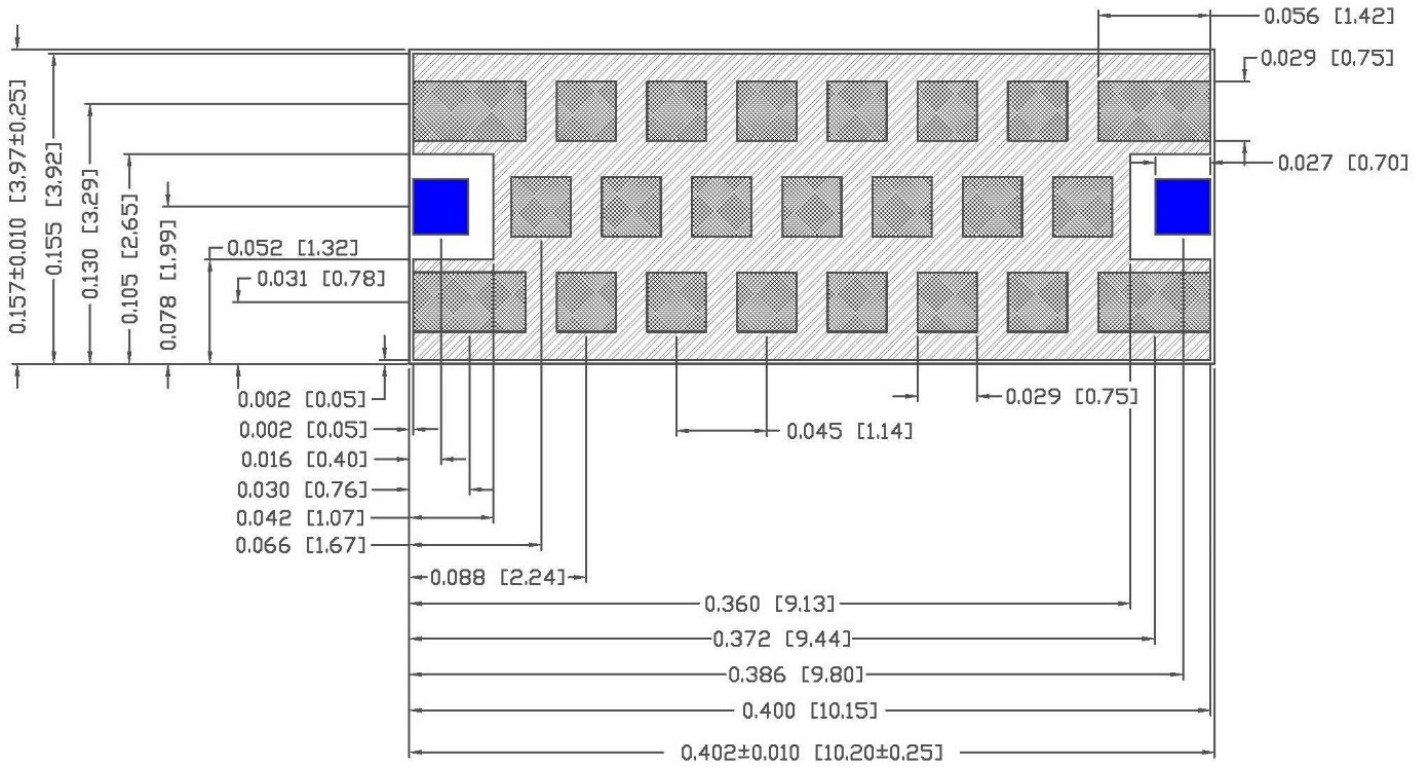

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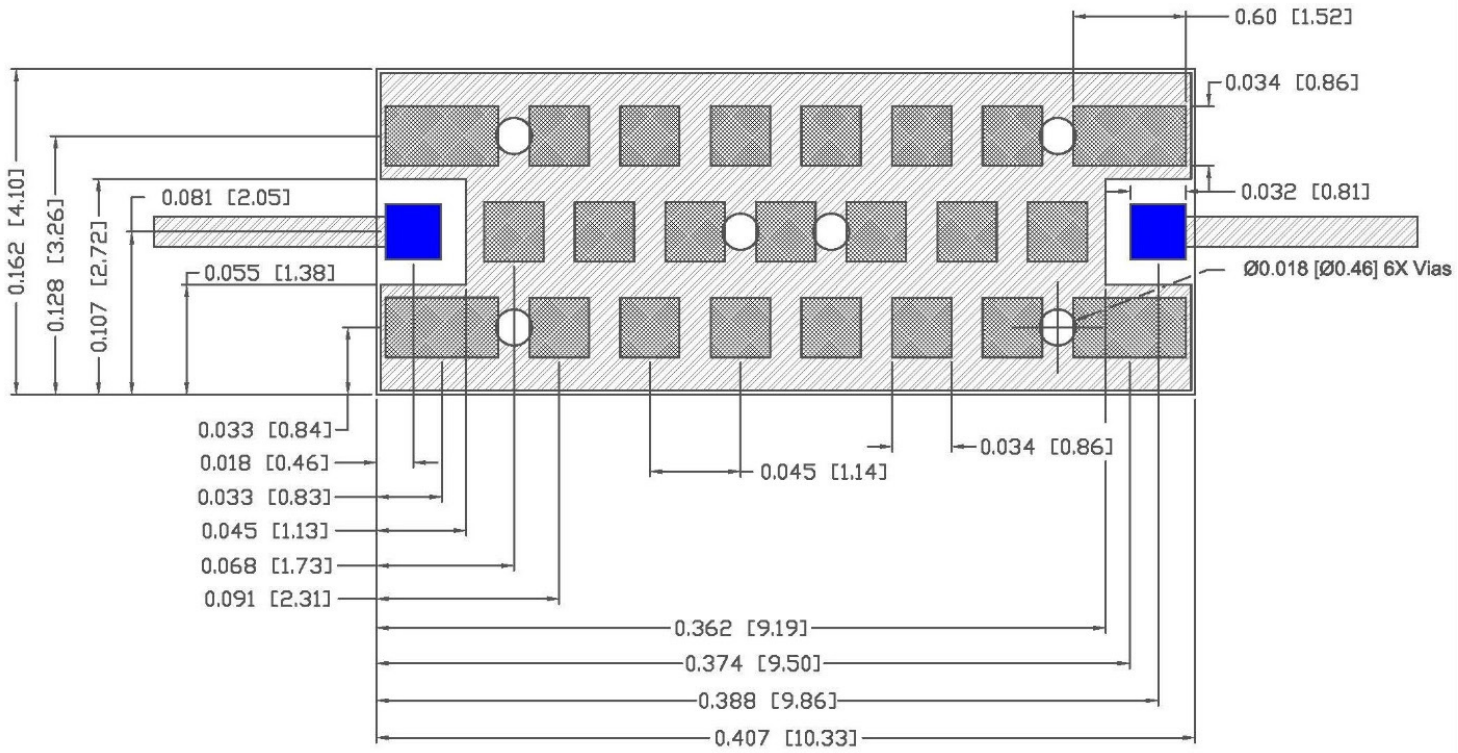

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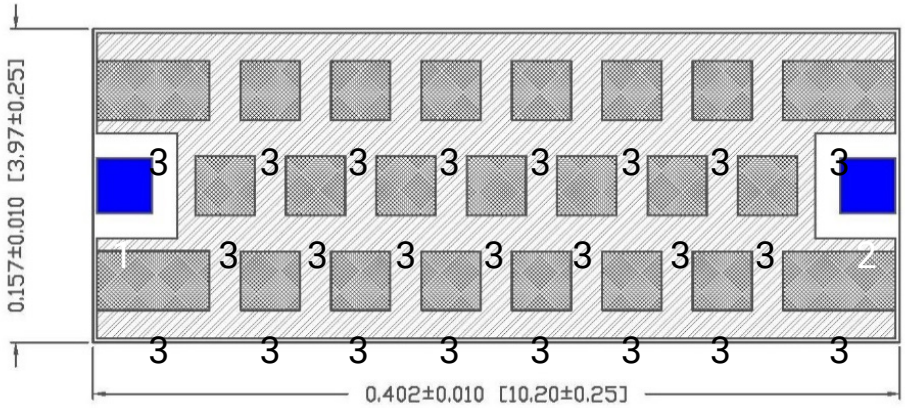

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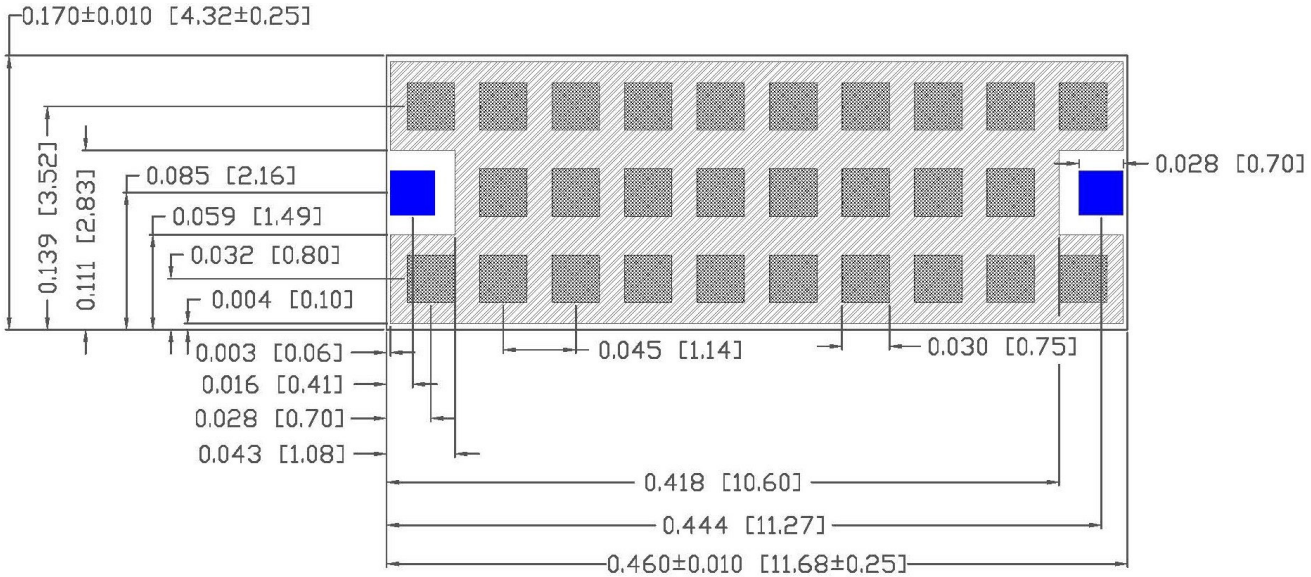

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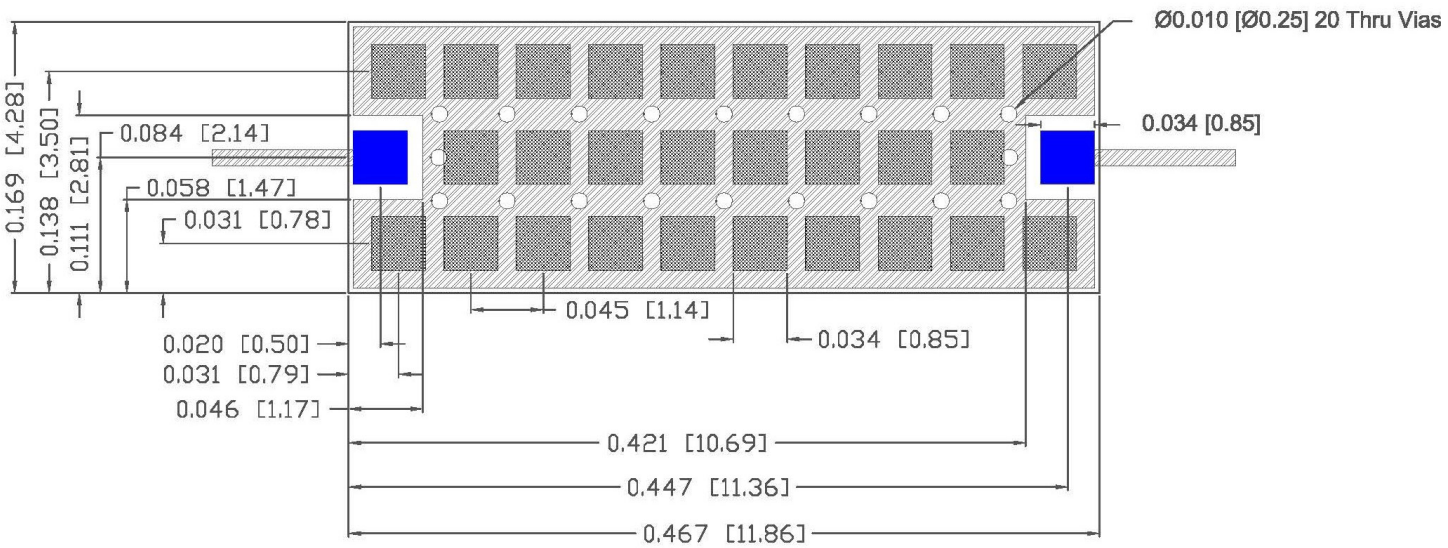

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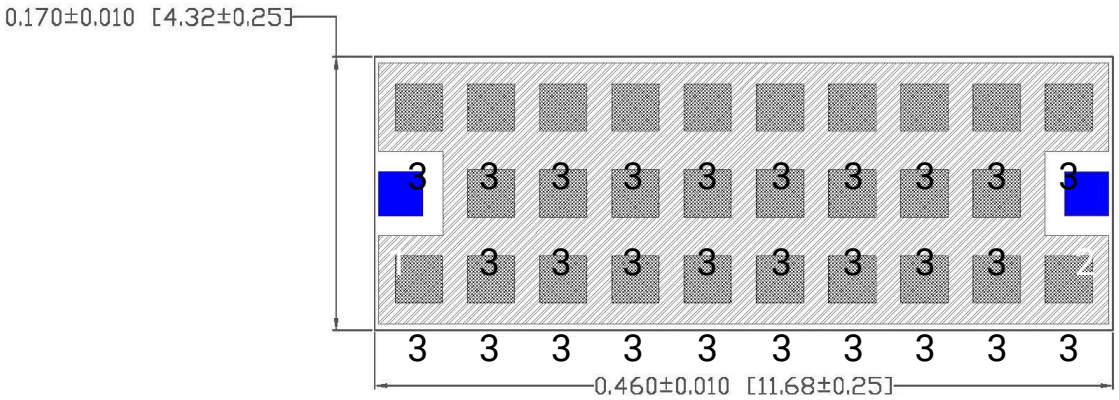
Footprint E

PAD CONNECTIONS



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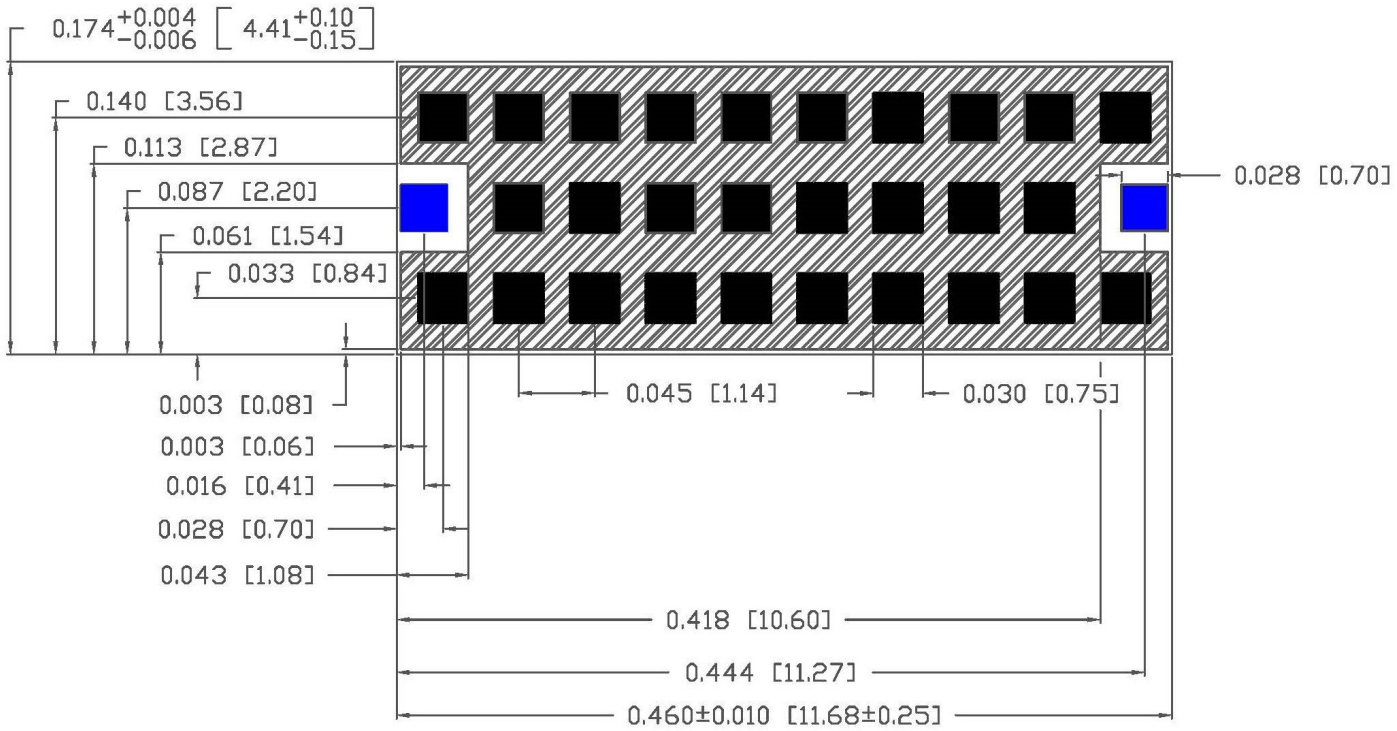
MECHANICAL SPECIFICATIONS



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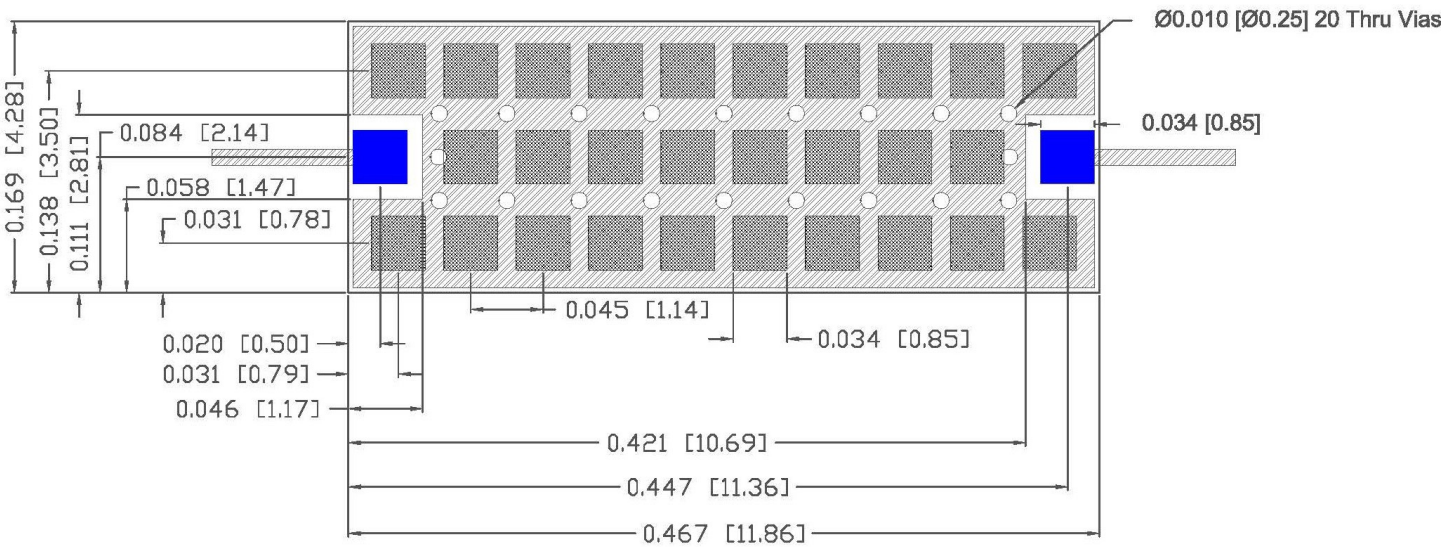

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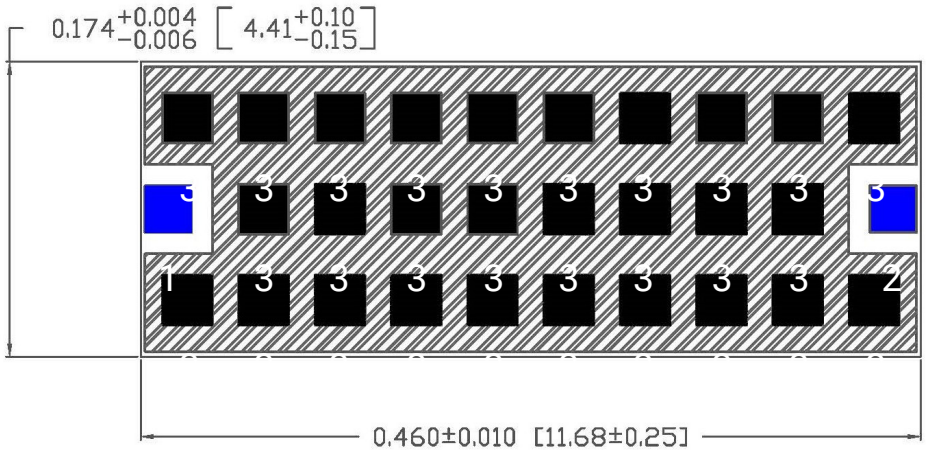

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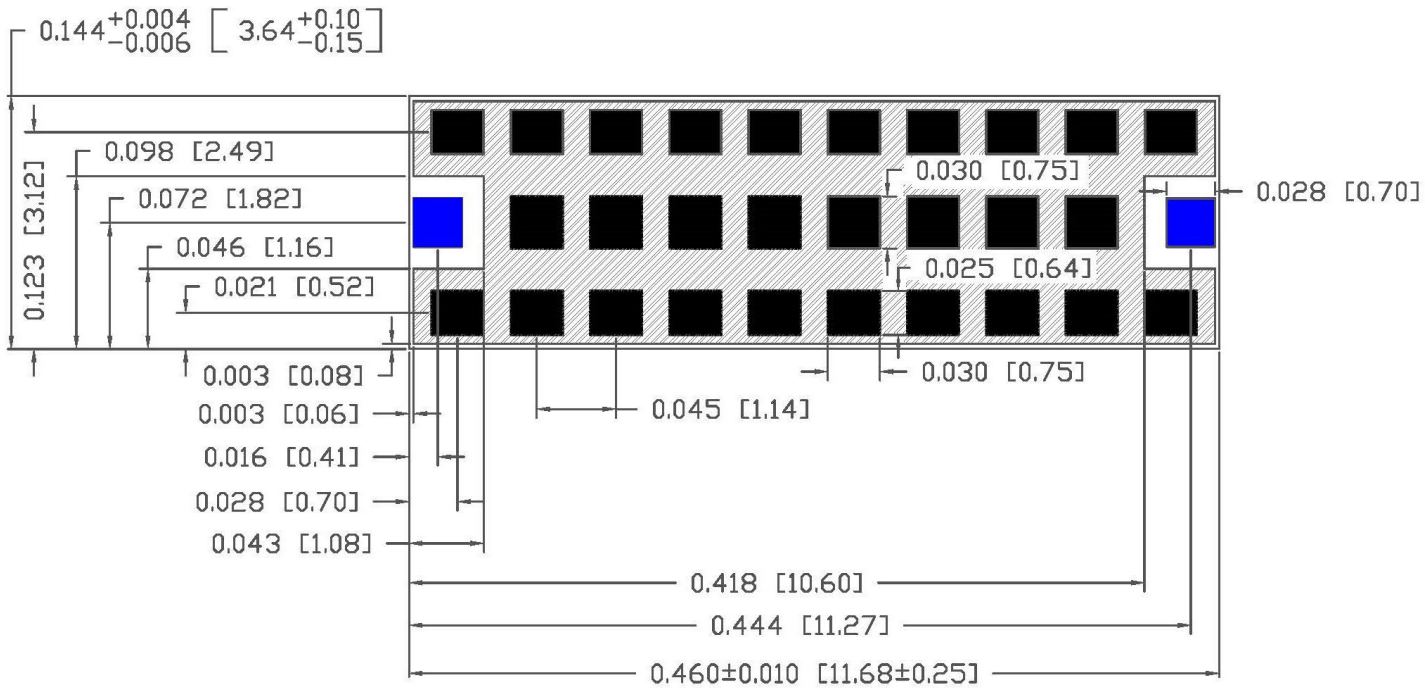

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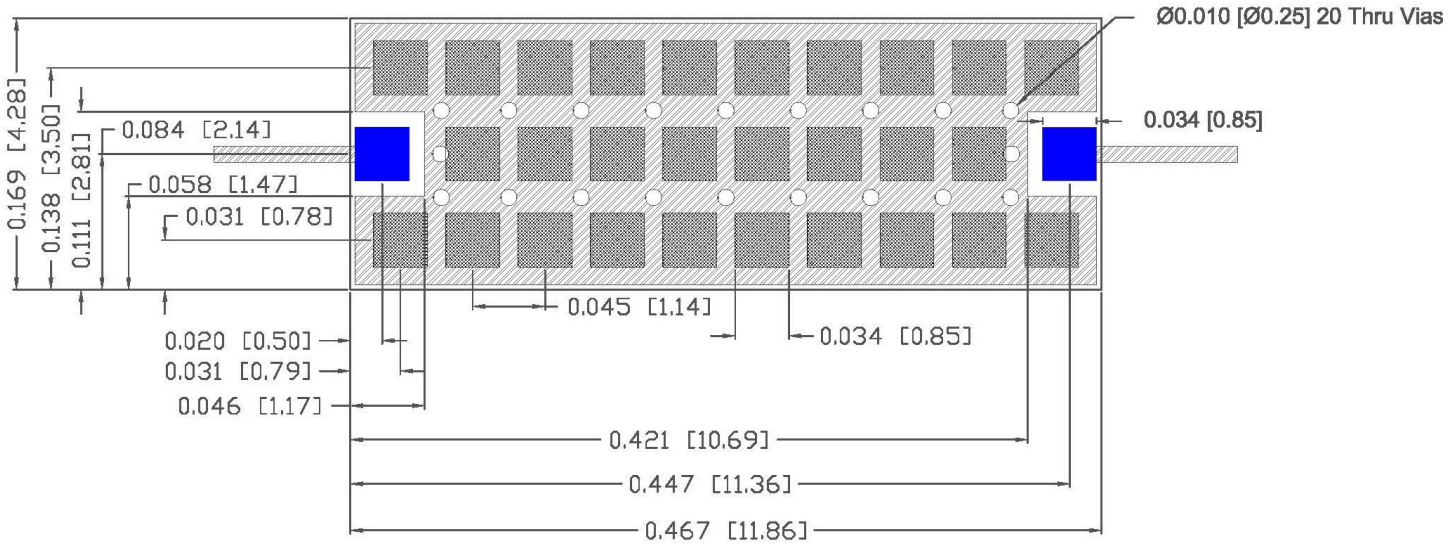

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Footprint E2

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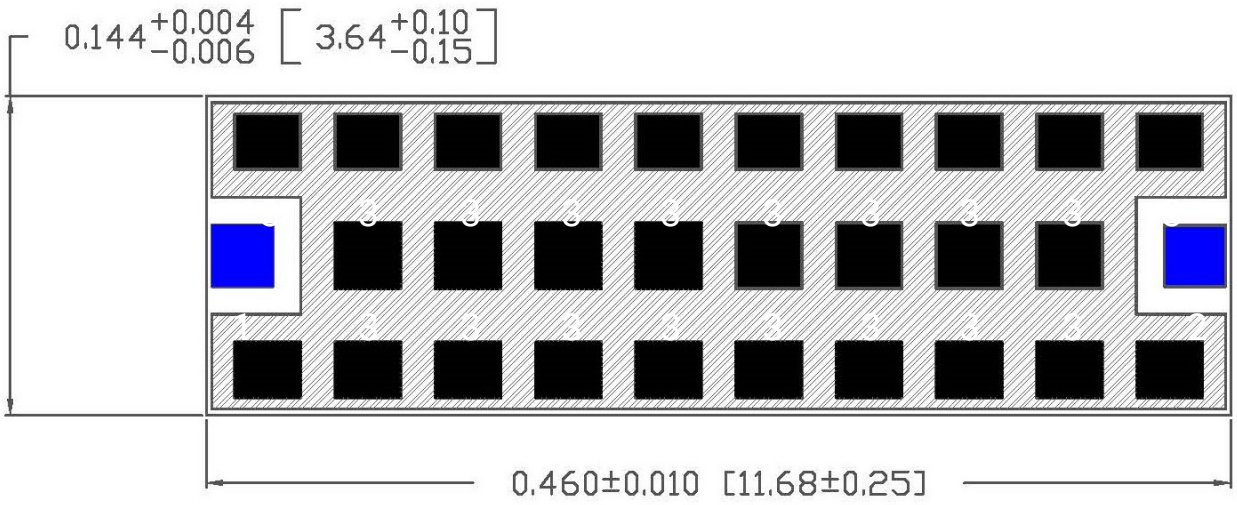

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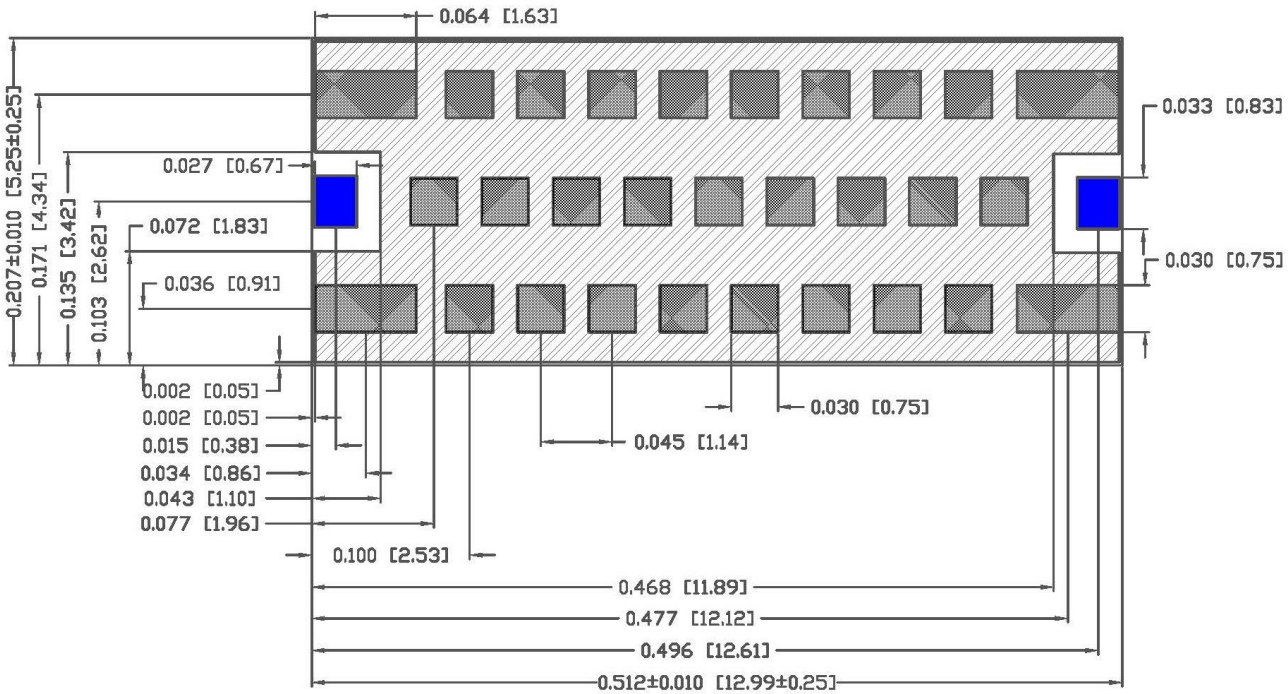
Dimensions in inches [mm]

MECHANICAL SPECIFICATIONS



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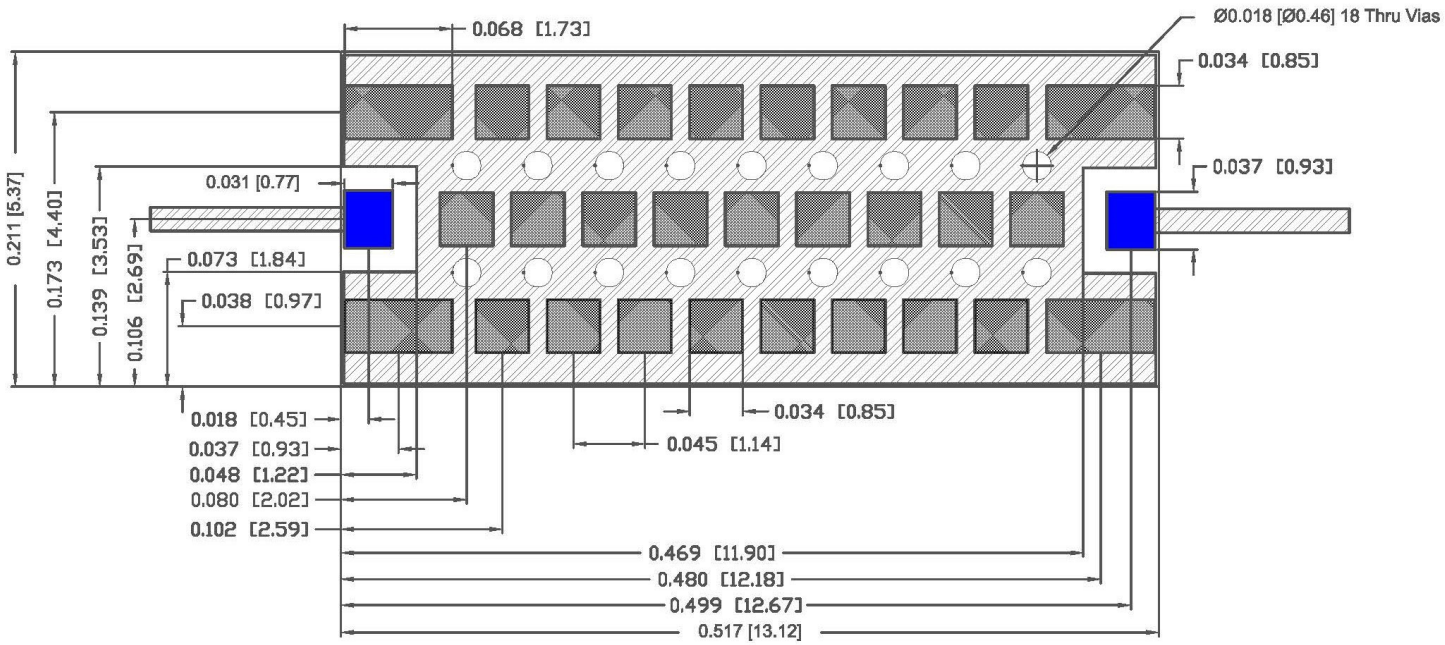

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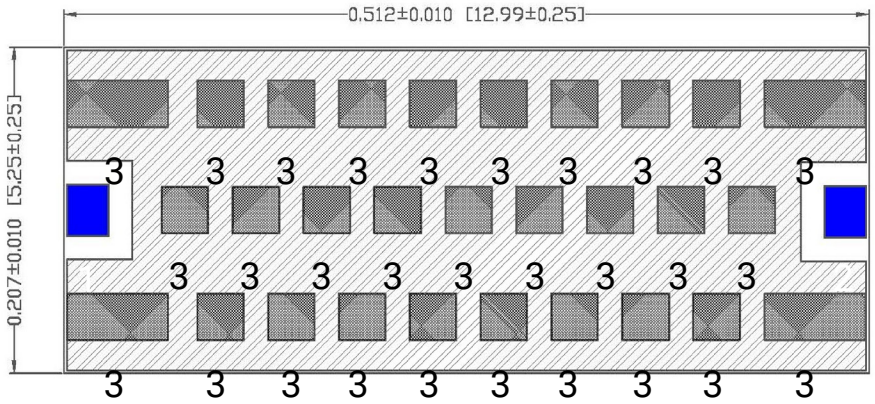

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MOUNTING RECOMMENDATIONS

AUTOMATED SMT ASSEMBLY

The following section describes the guidelines for automated SMT assembly of MLO® RF devices which are typically Land Grid Array (LGA) packages or side termination SMT pacages.

Control of solder and solder paste volume is critical for surface mount assembly of MLO® RF devices onto the PCB.

Stencil thickness and aperture openings should be adjusted according to the optimal solder volume. The following are general recommendations for SMT mounting of MLO® devices onto the PCB.

SMT REFLOW PROFILE

Common IR or convection reflow SMT processes shall be used for the assembly. Standard SMT reflow profiles, for eutectic and Pb free solders, can be used to surface mount the MLO® devices onto the PCB. In all cases, a temperature gradient of 3°C/sec, or less, should be maintained to prevent warpage of the package and to ensure that all joints reflow properly. Additional soak time and slower preheating time may be required to improve the out-gassing of solder paste. In addition, the reflow profile depends on the PCB density and the type of solder paste used. Standard no-clean solder paste is generally recommended. If another type of flux is used, complete removal of flux residual may be necessary. Example of a typical lead free reflow profile is shown below.

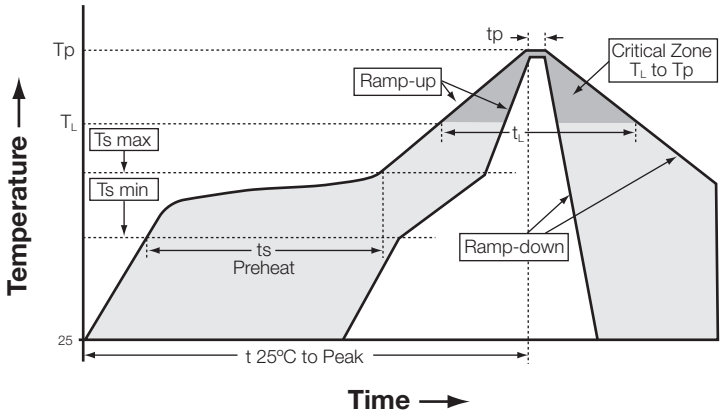

Figure A. Typical Lead Free Profile and Parameters

Profile Parameter	Pb free, Convection, IR/Convection
Ramp-up rate (Tsmax to Tp	3°C/second max.
Preheat temperature (Ts min to Ts max)	150°C to 200°C
Preheat time (ts)	60 – 180 seconds
Time above TL, 217°C (t_l)	60 – 120 seconds
Peak temperature (Tp)	260°C
Time within 5°C of peak temperature (tp)	10 – 20 seconds
Ramp-down rate	4°C/second max.
Time 25°C to peak temperature	6 minutes max.