عنوان مقاله:

Analysis of Heat-Transfer Enhancement and Design Parametersof Heat-Sink with Perforated Rectangular Ribs

محل انتشار:

دوازدهمین کنفرانس دینامیک شاره ها (سال: 1388)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Current Study investigates numerically the effects of attached perforated ribs on heat-transfer enhancement of a rectangular channel. Different Open-area ratio of perforation (Number and diameter of holes), Perforation inclination angle, Number of ribs for Reynolds range of 6000 up to 40000 Here examined. Equations Here solved by FLUENT® (ver.6.3), using standard k-w turbulence model. Results show significant augmentation in heat-transfer enhancement by applying perforations, as flow injects through dead-zone thermal traps of be thee en the ribs. inclination angle of perforation leads to more thermal performance. Pressure drop of channel decreases in the presence of perforation. .Good agreement between current study and earlier experimental studies approves the results of simulation

کلمات کلیدی:

Heat-Transfer Enhancement, Passive Cooling Technique, Heat-Sink, Perforated ribs