

Title (en)
APPARATUS FOR COOLING HEAT GENERATING ELECTRICAL COMPONENTS

Publication
EP 0000244 B1 19800723 (EN)

Application
EP 78300020 A 19780606

Priority
US 80709677 A 19770616

Abstract (en)
[origin: EP0000244A1] The apparatus comprises integrated circuit chips (10) which are to be cooled. <??>Heat is conducted from the chips (10) to a cold plate (36) by a heat transfer path including spring biased heat conducting members (26) and housing (16). <??>A thermal adapter (42) is sandwiched between the housing (16) and the cold plate (36) and introduces predetermined heat transfer characteristics between the housing and the plate. <??>The adapter can be a good or poor conductor. The adapter can comprise cut-out regions aligned with low powered chips to increase the thermal resistance to heat flow from those chips while the remaining regions, aligned with high powered chips, have a lower thermal resistance. This permits both the low and high powered chips to attain their optimum operating temperature.

IPC 1-7
H01L 23/36; **H01L 23/46**; **H01L 23/42**

IPC 8 full level
H05K 7/20 (2006.01); **H01L 23/373** (2006.01); **H01L 23/433** (2006.01); **H01L 23/473** (2006.01)

CPC (source: EP US)
H01L 23/3737 (2013.01 - EP US); **H01L 23/4338** (2013.01 - EP US); **H01L 23/473** (2013.01 - EP US); **H01L 2924/0002** (2013.01 - EP US)

Cited by
EP0006445A1; EP0316129A1; EP0103068A3; GB2120860A; EP0103067A3

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0000244 A1 19790110; **EP 0000244 B1 19800723**; DE 2860051 D1 19801113; JP S546774 A 19790119; JP S5631895 B2 19810724; US 4167771 A 19790911

DOCDB simple family (application)
EP 78300020 A 19780606; DE 2860051 T 19780606; JP 5021578 A 19780428; US 80709677 A 19770616