

Discrete Semiconductor Chips

Microsemi-Colorado's family of power rectifier and SCR chips are passivated with a multi-layer passivation consisting of poly silicon, silicon nitride, and pyrolytic glass. This state of the art passivation is coupled with precision controlled diffusion geometry to provide a stable chip having high surge capability, rugged construction and uniform electric field.

General purpose rectifiers utilizing this construction are available in current ranges of 1A to 300A with voltage capability to 1600V. Ultra fast recovery rectifiers are available in current ranges of 1A to 70A with voltages up to 800V. SCR's are available in current ranges of 8A through 40A with voltage capability of up to 1200V.

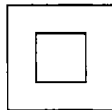
Schottky rectifiers are all guard ring protected for reverse energy capability. These chips are 100% reverse energy tested. Barrier design for the Schottky chips is either a tungsten barrier or a hybrid tungsten platinum barrier. Both barriers are less subject to degradation during high temperature soldering operations than most other commercially available barriers.

Devices are available as chips or with molybdenum disks attached for greater ease of handling and protection against stresses induced by thermal mismatch of the silicon chip to the heat sink material utilized. Standard chip contact metal is silver, but gold or aluminum are available upon special request.

Chips are shipped either in chip carrier trays or in freon, which serves to protect against both contamination and mechanical shock.

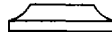
PLANAR

Figure 1

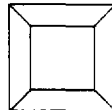


(Top View)

Figure 2



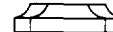
(Side View)



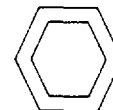
(Top View)

MESA

Figure 3



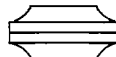
(Side View)



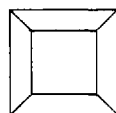
(Top View)

DOUBLE MESA

Figure 4



(Side View)

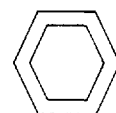


(Top View)

Figure 5



(Side View)



(Top View)

