

## INTRODUCTION

# GENERAL INFORMATION OF AMORPHOUS ALLOY

### FEATURES:

- Miniaturization of electronic equipment
- Excellent high frequency characteristics
- Spike current reduction
- Noise suppression
- Energy saving

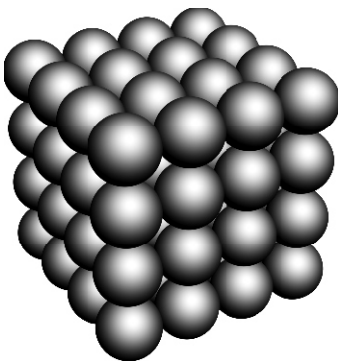
### CHARACTERISTICS:

- Technology of rapid solidification process
- Excellent magnetic properties
- Strip thickness of 15 $\mu$ M to 25 $\mu$ M
- High electrical resistivity
- Low core loss at high frequency

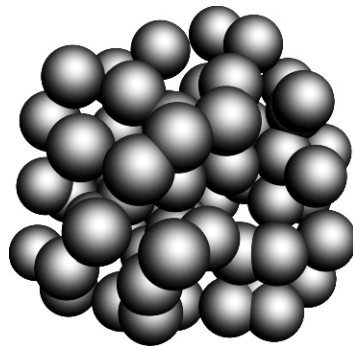
### COMMON APPLICATIONS:

- DC/DC Converter
- AC/DC Converter
- Switch-mode power supply
- High frequency transformer
- Input noise reduction chock in automotive application of car audio
- Pulse transformer for telecommunication, xDSL, ADSL, VDSL
- Boost choke for power factor correction
- Current / voltage sensing
- Differential mode choke for inverter
- Common mode noise reduction choke
- Magnetic head
- Choke for temperature controlling circuit of automobile
- Flux-gate sensor for navigation system
- Magnetic tag for library, market
- Magnetic sensor for over-temperature in household transformer

### Atomic Structure



Crystalline Structure



Amorphous Structure

### *Magnetic Core Made of Amorphous Alloys*

technology of molten metal at cooling rates of about a million degrees centigrade per second. During this Step the metal is rapidly quenched as a ribbon with liquid-like internal structure.

The good soft magnetic properties of amorphous alloys principally arise from the homogeneous and isotropic amorphous

Amorphous alloy are produced by rapid solidification

structure. As amorphous alloys have evolved into useful applications, more development have followed.

The main constituents for electromagnetic applications are Fe- and Co- based amorphous alloys. More recently, the nanocrystalline materials are also used in all the electronic areas. Various magnetic properties such as permeability, coercive force field, rectangular ratio and so on could be obtained by suitable heat treatment according to application area.