



China Array Plastics LLC

Injection Molders of High Performance Thermoplastics

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Application: Injection Moldable electromagnetic interference (EMI) and radio frequency interference (RFI) suppression in telecommunications, wireless, medical and computer peripherals applications

Wave X[®]

Wave X[®] is a breakthrough material that suppresses EMI and RFI at the source. By being injection moldable Wave X[®] components can have thinner walls, greater geometric complexity, and features such as holes, slots, notches and angles molded in to fit applications where space constraints are critical: e.g. chip sets, wireless or RFID devices. Components can be set closer to the interference source thereby increasing suppression effectiveness.



Wave X[®] Molded Shields:
Notched design to fit tight applications



Wave X[®] EMI Absorber
Even dispersion of absorber fill allows angled design

Manufacturing in China Since 1980

<http://www.chinaarray.com>

Thermoplastic Injection Molding Insures Even Dispersion of Shielding Material

Injection moldable Wave X[®] evenly disperses interference material throughout the length and breadth of a component. Earlier shielding technologies, such as thermoset plastics or liquid molded silicone, imposed inherent limitations on dispersion, wall thickness and geometry. Wave X[®] suspends shielding material in a thermoplastic (i.e. a plastic that can be reheated), which provides a superior medium for dispersion allowing it to flow around holes and notches, and out to the tips of thin walled geometric shapes such as sharp angles.

Intricate finished components can be molded to fit tight spaces with reduced stress, cost or secondary operations. Parts can be molded to tighter tolerances with complete repeatability. The shielding material, encapsulated in the thermoplastic, flows to the edges of the component insuring effective suppression at the source of interference: an ideal solution for complicated applications such as telecommunications, wireless, medical and computer peripherals.

Wave X[®] Achieves

- Suppresses noise at the source
 - RF interference
 - EMI interference
 - Attenuates SAR emissions
- Attenuates from 5 MHz to 10 GHz
- Can sometimes eliminate the need for shielding
- Enhances RFID performance
- Occupies minimal space
- Provides cost effective, easily installed solution

China Array and Wave X[®]

Injection molding the highly filled thermoplastics required for Wave X[®] applications requires extremely precise molding processes with full control over mold temperatures throughout. Mold design and construction are also critical to success. China Array's experience molding high heat thermoplastics (with melt temperatures three to five times higher than commodity plastics) makes it well suited to mold the intricate components made from Wave X[®]. Proper sizing and positioning of cooling channels and vent lines in molds, precision injection molding machines and mold temperature controllers, and tight control of molding processes combine to create defect free, EMI/RFI suppression components with excellent repeatability and consistency.

[®] Wave X is a registered trademark of ARC Technologies Inc. (www.arc-tech.com)