1960 1970 1980 1990 2000 2010～

Start of color TV broadcasting
IC desktop calculators
VCRs for home use
Microcomputer 4004
PCs
"Space Invaders" arcade game
Introduction of noise regulations on digital equipment
CD players
Spread of electronic game consoles for homes
Increasing ratio of SMD components in equipment
Mobile phones
Digital video players/recorders
GPS car navigation
Widespread use of the internet
USB
IEEE1394
USB2.0
HDMI
Start of digital terrestrial broadcasting
Spread of FTTH optical communication
USB3.0
IC cards
Smartphones
Launch of LTE services
Widespread use of mobile data communications
Widespread use of LED light bulbs
100 Mbps Ethernet
Tablet computers

Common Mode Choke Coils

For DC lines
Initial common mode choke for power supplies

For DC lines

Monolithic type chip
Winding type chip
Film type chip
Winding type chip 3.2×1.6
Market launch of common mode chokes for high-speed differential signal lines
Film type chip (with two built-in circuits)
Winding type chip 2.0×1.25
Trifilar type chip for audio signal lines, 2.5×2.0
Monolithic type chip for audio signal lines, 1.25×1.0
Film-type chip for differential signal lines (with two built-in circuits), 1.5×0.65
Film technology for downsizing
Film type chip for differential signal lines (with two built-in circuits), 2.0×1.0
Winding (V*) type chip (Low profile) 5.0×5.0
Film type chip for differential signal lines, 0.85×0.65
Film type chip for differential signal lines, 0.65×0.5
Winding (H**) type chip 4.5×3.2
Common mode choke coil for large current 12.9×6.6
Film type chip for differential signal lines, 1.25×1.0
Monolithic type chip for differential signal lines, 1.25×1.0
Winding (V*) type chip 4.0×4.0

Inductor Types (Chip Coils)

V* for choking, 3.2×2.5
Introduction of the new concept of choking

Winding (V*) type chip 4.5×3.2
Winding (V*) type chip 3.2×2.5
Film type chip 3.2×1.6
Winding (V*) type chip 3.2×1.6
Monolithic type chip 2.0×1.25
Medium winding (V*) type chip 6.3×6.3
Compact winding (V*) type chip for choke 2.0×1.6
Winding (H**) type HAC coil 12×10
Winding (H**) type chip ferrite inductor 1.6×0.8
Winding (H**) type chip ferrite inductor 1.0×0.5

Power Inductor

H type**
Launch of H** inductors with outstanding radio-frequency characteristics for the mobile communication market
Film type chip 0.6×0.3
Film technology for downsizing and higher precision
Monolithic chip inductor 3.2×1.6
Winding (V*) type chip inductor 3.0×3.0
Smallest PI Monolithic type 1.6×0.8
Monolithic type for large current lines, 2.5×2.0
Winding (V*) type chip inductor (Low Rdc) 2.5×2.0×1.0

RF Inductor

Winding (V*) type chip 2.0×1.25
Film type chip 1.6×0.8
Monolithic type chip 1.6×0.8
Monolithic type chip 1.0×0.5
Winding (H**) type chip 1.0×0.5
Winding (H**) type chip 0.8×0.4
Film type chip 0.4×0.2
Monolithic chip for Automotive 1.0×0.5
Winding (H**) type chip ferrite inductor 2.1×1.2
Film type chip High Q inductor 0.6×0.3
Winding (H**) type chip coil 2.0×1.2
Film type chip High Q inductor 0.4×0.2
Ultra-compact winding (H**) type chip inductor 0.6×0.3
Ultra-compact film type chip coil (Under development) 0.25×0.125

Inductor Types (Ferrite Beads)

Ferrite bead inductors
First SMD type EMI filter

High-impedance 600Ω type chip ferrite bead

Chip ferrite bead 4.5×1.6
Downsizing accelerated after market launch of SMD products

Chip ferrite bead 1.6×0.8
Chip ferrite bead array 3.2×1.6×0.8
Chip ferrite bead for large current line 2.0×1.6×1.6
Chip ferrite bead 0.6×0.3
Chip ferrite bead array 2.0×1.0×0.5
Chip ferrite bead for large current lines, 1.6×0.8
Ultra-compact chip ferrite bead 0.4×0.2
Chip ferrite bead for large current lines, 1.0×0.5
Compact chip ferrite bead for large current lines, 0.6×0.3
Ultra-compact chip ferrite bead 0.25×0.125

For Radio Frequency (GHz)

Chip ferrite bead for GHz band, 1.6×0.8
Launch of GHz band products for the mobile communication market

Chip ferrite bead for GHz band noise & large current lines, 1.6×0.8
Chip ferrite bead for over-GHz band noise, 1.6×0.8
Chip ferrite bead for GHz band noise, 1.0×0.5
Chip ferrite bead for GHz band noise & large current lines, 1.0×0.5
Chip ferrite bead for over-GHz band noise, 1.0×0.5
Compact chip ferrite bead for GHz band noise, 0.6×0.3

LC/RC Combined Types

Wide-band noise filter for DC lines
D-sub connector with built-in filter
High shape factor filter for high-speed signal lines
Chip EMI filter for DC lines (T type)
High shape factor chip EMI filter for signal lines, 5.0×2.5
Resonance absorption type chip EMI filter
High shape factor for signal lines, 3.2×1.6
Microwave absorber
High shape factor for signal lines, 1.6×0.8
High shape factor for signal lines (T type), 1.6×0.8
High shape factor for signal lines (π type), 1.6×0.8
High shape factor for signal lines (with four built-in circuits), 2.0×1.25
Film type microchip coupler 1.6×0.8
High shape factor for signal lines (with four built-in circuits), 1.6×0.8
Film type microchip fuse 1.0×0.5
Monolithic type chip three-terminal capacitor 1.0×0.5
Film type microchip transformer 2.0×1.0
High shape factor for signal lines (T type), 1.6×0.8
High shape factor for signal lines (T type), 1.0×0.5
Block type EMIFIL lead low-profile type 12.0×11.0
Market launch of SMD type high-performance products
Winding type microchip transformer 2.0×1.2
Film type microchip transformer 1.6×0.8
SMD Block type EMIFIL 12.1×9.1
High shape factor for differential transmission (with four built-in circuits), 1.6×0.8

Capacitor Types

Feed-through capacitor for industrial use
Cylindrical feed-through capacitor for consumer appliances
Bushing mount type feed-though capacitor
EMI filter for satellites
Three-terminal capacitor
Compact feed-through capacitor 2.54 mm dia.
Chip three-terminal capacitor 4.5×1.6
Three-terminal capacitor for DC lines, 4.5×1.6
Array type capacitor with eight built-in circuits
Chip three-terminal capacitor 3.2×1.25
Chip three-terminal capacitor 2.0×1.25
Compact array type capacitor with four built-in circuits
Three-terminal capacitor for DC lines, 1.6×0.8
Compact three-terminal capacitor with built-in multi-layer ceramic capacitor

Varistor Types

Three-terminal capacitor with surge absorber
Compact three-terminal capacitor with surge absorber
Ultra-compact three-terminal capacitor with surge absorber
Chip varistor for surge absorption 1.6×0.8
Capacitor with varistor function

Components from the EMI Filter Division have such a great history!

Filters for AC lines

Box type noise filter for AC lines
Troidal core type common mode choke coil
Bobbin type common mode choke coil
Three-terminal capacitor for AC lines
Inlet with noise filter for AC lines
Feed-through capacitor for AC lines
Hybrid type common mode choke coil
Winding type filter for AC lines, 25×23
Chip three-terminal capacitor 1.0×0.5
Used as low ESL capacitor