

Note

- The product information below is related with the "Administrative Measure on the Control of Pollution Caused by Electronic Information Products" of the People's Republic of China (China RoHS).
Please notice that this is different from the EU Directive 2002/95/EC(RoHS Directive).
- "10" in the Environment-Friendly Use Period column means that the use period is 10 years (Mark-1) and "e" means non-inclusion of toxic and hazardous substance mark (Mark-2).
- Concentrations below those established in Standard SJ/T11364-2006 are represented by "○", and those above the standard are represented by "X".



Mark-1



Mark-2

EMC Components

Categories			Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks	
SMD	For Signal Line	Low Rdc, Low Profile, Low Cross Points	MMZ1608-C	e	○	○	○	○	○	○		
			MMZ0603	e	○	○	○	○	○	○		
		Low Rdc, Wide-band	MMZ1005	e	○	○	○	○	○	○		
			MMZ1608	e	○	○	○	○	○	○		
			MMZ2012	e	○	○	○	○	○	○		
	For Power Line	—	MPZ1005	e	○	○	○	○	○	○		
			MPZ1608	e	○	○	○	○	○	○		
			MPZ2012	e	○	○	○	○	○	○		
			ZBFS5105-PT-01	e	○	○	○	○	○	○		
SMD Array	For Signal Line	For 2 Lines	MZA1210	e	○	○	○	○	○	○		
		For 4 Lines	MZA2010	e	○	○	○	○	○	○		
	For Audio/USB1.1 Signal Line	For Suppression of Differential/Common Mode Noise	MZA3216	e	○	○	○	○	○	○		
			MCZ1210AD-T001, MCZ1210AD-T002, MCZ1210CT	e	○	○	○	○	○	○		
Ferrite Bead Filters	Lead	For Signal Line	—	ZBF	e	○	○	○	○	○		
3-terminal Filters	For Signal Line	T Type Filter	ACF321825, ACF451832	e	○	○	○	○	○	○		
			MEM2012D	e	○	○	○	○	○	○		
			MEM2012T	e	○	○	○	○	○	○		
			MEM2012T-S1	e	○	○	○	○	○	○		
	For Wide-Band	T Type Filter	Pi Type Filter	MEM2012P	e	○	○	○	○	○	○	
			T Type Filter	MEM2012TC	e	○	○	○	○	○	○	
			5th T-Pi Type Filter	MEM2012W	e	○	○	○	○	○	○	
	For Power Line	T Type Filter	ACH3218, ACH32C, ACH4518	e	○	○	○	○	○	○		
SMD Array	For Signal Line	Pi Type Filter for 3 Lines	MEA3216P	e	○	○	○	○	○	○		
		L Type Filter for 4 Lines	MEA2010L	e	○	○	○	○	○	○		
3-terminal Feed Through Capacitors	SMD	For Signal Line and Power Line	—	CKD	e	○	○	○	○	○		
Common Mode Filters	SMD	For High-speed Differential Signal Line	For 2 Lines	ACM-D, ACM-H	e	○	○	○	○	○		
			For 2 Lines	TCM1005, TCM1210, TCM1608	e	○	○	○	○	○	○	
				For 4 Lines	TCM2010	e	○	○	○	○	○	○

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Categories			Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks	
Common Mode Filters	SMD	For High-speed Differential Signal Line/General Signal Line	For 2, 3Lines	ACM	e	○	○	○	○	○		
			For 2, 3, 4, 6, 8 Lines	ZCYS	e	○	○	○	○	○		
			For xDSL	For 2 Lines	ZCYS	e	○	○	○	○	○	
			For CAN-BUS	For 2 Lines	ACT4532, ACT45B	e	○	○	○	○	○	
			For CAN-BUS/General Signal Line	For 2 Lines	ZJYS81	10	X	○	○	○	○	
			For General Signal Line	For 2, 4 Lines	ZJYS51, ZJYS81	10	X	○	○	○	○	
				For 2 Lines	ZBYS5101-2PT-01	e	○	○	○	○	○	
					ACM1211	e	○	○	○	○	○	
					ACM1513	e	○	○	○	○	○	
					ACM2012	e	○	○	○	○	○	
					ACM2520	e	○	○	○	○	○	
					ACM3225	e	○	○	○	○	○	
					ACM4532	e	○	○	○	○	○	
					ACM7060	e	○	○	○	○	○	
					ACM9070	e	○	○	○	○	○	
	DIP	For General Signal Line/Power Line	For 2, 4, 8 Lines	ZJY	10	X	○	○	○	○		
Common Mode Choke Coils	Pin Terminal/Lead	For Signal Line	—	UF, TF	Information varies according to product.						Please contact us for more details.	
	Pin Terminal	For Power Line	Compact and Separable Bobbin Type	UF	Information varies according to product.						Please contact us for more details.	
			Closed Magnetic Circuit Core Type	HF	Information varies according to product.						Please contact us for more details.	
Differential Mode Choke Coils	Radial	Standard Type Non-molded	—	SF-T-PF	e	○	○	○	○	○		
		Square Core Type	—	SF-C-PF	e	○	○	○	○	○		
	Axial	Varnished and taped	—	SF-HP-PF	e	○	○	○	○	○		
	Pin Terminal	With Substrate	—	SF1-T-PF	e	○	○	○	○	○		
Varistors	Countermeasure for Surge and Static Electricity	SMD	—	AVR	e	○	○	○	○	○		
	For Micro-motors	Ring type	SrTiO3 System	VAR-18	e	○	○	○	○	○		
EMC Filters for AC Power Line	For triple-phase, Large-size Box Cased	Block Terminal	—	ZRCT, ZRGT, ZRCF, ZRWT	10	X	○	○	○	○		
		Screw Terminal	—	ZACT, ZAGT, ZCW	10	X	○	○	○	○		
	For single-phase, Mid-sized Box Cased	Block Terminal	—	ZRCS, ZRGS, ZRC, ZRAC	10	X	○	○	○	○		
		Screw Terminal	—	ZAC, ZAG, ZAP	10	X	○	○	○	○		
		Faston Terminal	—	ZHC, ZHG	10	X	○	○	○	○		
		Faston Terminal	—	ZCB	10	X	○	○	○	○		
	For single-phase, Compact-size Box Cased	Lead Wire	—	ZGB, ZMB	10	X	○	○	○	○		
		Pin Terminal	—	ZMG	10	X	○	○	○	○		
	Inlet-socket Type	Faston / Lug Terminal	—	ZUG, ZUB	10	X	○	○	○	○		
Clamp Filters (Ferrite Core with Case)	For Cable	With Self-holding Mechanism	Sleeve Core Type	ZCAT-E	e	✓	○	○	○	○		
			—	ZCAT	e	○	○	○	○	○		
Ferrites	Cores for EMI Suppression	Bead Cores	1 Hole (Materials: HF57, HF70)	BB	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
			6 Holes (Materials: HF57, HF70)	R6H	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	

• Faston is a registered trademark of Tyco Electronics AMP Corp. Incorporated.

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Categories			Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks	
Ferrites	Cores for EMI Suppression	For Round Cable	Cylindrical (Materials: HF57, HF70)	RH	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
			Separate Cylindrical (Materials: HF57, HF70)	RU	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
			Toroidal (Materials: HF57, HF70)	T	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
			Toroidal (Materials: HS10, HS52, HS72)	T	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
		For Flat Cable/Flexible Substrate	Rectangular (Materials:HF57, HF70)	SH	e	○	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
			Separated Rectangular (Materials :HF57, HF70)	SU	e	○	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
		For ICs and Connectors	Multiple Holes Plate (Materials: HF57, HF70)	MH	e	○	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
			Plate (Materials: HF57, HF70)	SP	e	○	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
		Sample Kits	Materials: HF55, HF70	-	e	○	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.

Ferrites

Categories			Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
Materials	High Saturation Flux Density Material for Automobile	Material PE33	—	PE33	e	○	○	○	○	○	
	Wide Temperature Range, DC Superposition Suitable, High Inductance Material	Material DNW45	—	DNW45	e	○	○	○	○	○	
	DC Superposition Suitable High Inductance Material	Material DN45	—	DN45	e	○	○	○	○	○	
	Low THD Material	Materials DN40, DN70	—	DN40, DN70	e	○	○	○	○	○	
	High Permeability Material	Material H5C5	—	H5C5	e	○	○	○	○	○	
	Wide Temperature Range and High Permeability Materials	Material H5C4	—	H5C4	e	○	○	○	○	○	
	Wide Temperature Range, Low Loss Power Material	Material PC95	—	PC95	e	○	○	○	○	○	
	Low Loss Material for Power Supply	Material PC47 Materials PC45, PC46	—	PC47 PC45, PC46	e	○	○	○	○	○	
	High Saturation Flux Density Material	Material PC33	—	PC33	e	○	○	○	○	○	

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Products Conforming with China RoHS



Categories		Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks	
Cores for Transformers/ Choke Coils/ Filters	For Main Transformers of Power Supplies/ Line Filters/ Smoothing Chokes	Materials : PC33, PC40, PC44, PC47, PC50, PC95, HS10, HS52, HS72	—	E, EI, EE, EF, EER, ETD, EC, PQ, LP, EPC, EP, RM, ET, UU, FT, T, Planar Cores, SMD Cores	e	○	○	○	○	○	Please contact us for information about bobbins and metal fittings
	For High Power	Materials : PC40, PE22	—	T, UU, UI, EC, EIC, EE, EI, DT, PQ, PM, SP	e	○	○	○	○	○	
	For Transmitting Transformers/ Filters	Materials : H5A, H5C2, H5C3, H5C4, H5C5, PC40, PC44, PC50	—	P, RM, EP, T, SMD Cores	e	○	○	○	○	○	Please contact us for information about bobbins and metal fittings
Cores for EMI Suppression	Materials	High Permeability Material	—	HF90	e	○	○	○	○	○	
	For Coils	Materials: GT1, GT2, GT3, GT4, GT5, GT6, GT7, GT8, GT9, L2H, L13H, L14H, L17H, L18H, L20H, L4, L5, L6, L6N, L7H, L7R, L8F, L9H, SY20, T2F, T6F, T9F	—	DR, FT, THP, P, TH, ACD	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
	For Choke Coil/Balun Transformer	Materials : GT2, GT3, GT5, GT7, L2H, L4, L5, L6, L7H	—	RHH, R4H, RID, R	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
	For Common Mode Filter (Ni-Zn)	Materials : GT2, GT3, GT5, GT7, L2H, L4, L5, L6, L7H	—	T	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
	Bead Cores	1Hole (Materials: HF57, HF70)	—	BB	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
		6 Holes (Materials: HF57, HF70)	—	R6H	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
	For Round Cable	Cylindrical (Materials: HF57, HF70)	—	RH	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
		Separated Cylindrical (Materials: HF57, HF70)	—	RU	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
		Toroidal (Materials: HF57, HF70)	—	T	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
		Toroidal (Materials: HS10, HS52, HS72)	—	T	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.
For Flat Cable/ Flexible Substrate	Rectangular (Materials: HF57, HF70)	—	SH	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
	Separated Rectangular (Materials: HF57, HF70)	—	SU	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
For ICs and Connectors	Multiple Holes Plate (Materials: HF57, HF70)	—	MH	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
	Plate (Materials: HF57, HF70)	—	SP	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
Sample Kits	Materials: HF55, HF70	—	—	e	○	○	○	○	○	Please contact us for information on materials other than those shown on the left.	
For Ultrasonic Applied Equipment	Pi Type Ferrite Magnetostrictive Vibrators	—	—	V2	e	○	○	○	○	○	

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Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
For Electrolysis	Ferrite Electrodes	—	—	N102	e	○	○	○	○	○	○	
For High Frequency Welding	Impeder Cores	—	—	IPH	e	○	○	○	○	○	○	

Magnets

Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
Ferrite Magnets	Materials	—	—	FB	e	○	○	○	○	○	○	
Nd-Fe-B Type Magnets	Materials	—	—	NEOREC	e	○	○	○	○	○	○	
Sm-Co Type Magnets	Materials	—	—	REC	e	○	○	○	○	○	○	
Nd-Fe-B Type Plastic Bonded Magnets	Materials	—	—	CM	e	○	○	○	○	○	○	
Ferrite Type Rubber Bonded Magnets	Materials	—	—	BQ	e	○	○	○	○	○	○	

Sensors

Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
NTC Thermistors	SMD	—	—	NTCG	e	○	○	○	○	○	○	
	Assembly Products	Epoxy Resin Case Type/ ABS Resin Case Type/ Oil Temperature Sensors	—	NTCGP, NTCDP	10	X	○	○	○	○	○	
	Axial Lead	Glass-Sealed	—	NTCDS	10	X	○	○	○	○	○	
Temperature-responsive Reed Switches	Temperature-responsive Ferrite + Magnet + Reed Switch	—	—	TR	e	○	○	○	○	○	○	
Humidity Sensors	Unit Type	Circuit Built-in	—	CHS	10	X	○	○	○	○	○	
	Element Type	Variable Resistance Type	—	CHS-XS	10	X	○	○	○	○	○	
Surface Potential Sensors	Feed-back Type	—	—	EFS	10	X	○	○	○	○	○	
Toner Concentration/ Residual Volume Sensors	Permeability Sensing Type	With Voltage Control	—	TS-L, TS-A, TS-K	10	X	○	○	○	○	○	
Powder Level Sensors	Piezoelectric Type	—	—	LTS, TSP	10	X	○	○	○	○	○	
Door Open/Shut Sensors	Reed Switch Built-in	—	—	PCSW	Information varies according to product.						Please contact us for more details.	
Visible Radiant Optical Sensors	Amorphous Silicon Type	—	—	BCS	e	○	○	○	○	○	○	

Actuators

Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
Compact Plungers	Push/Pull, Bistable, Auto Return	—	—	P	Information varies according to product.						Please contact us for more details.	
Miniature Plungers	Micro-current Driven Electromagnetic Type	—	—	MA	e	○	○	○	○	○	○	
Ultrasonic Nebulizer Units	For Mist Generating System	—	—	NB	Information varies according to product.						Please contact us for more details.	

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Buzzers/ Receivers

Categories		Series			Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
Electromagnetic Buzzers	Pin Terminal	Without Oscillator Circuit	—	SD	e	○	○	○	○	○	○	
		Without Oscillator Circuit	—	SDC	10	X	○	○	○	○	○	
	SMD	Without Oscillator Circuit	—	SDR	e	○	○	○	○	○	○	
Piezoelectric Buzzers	Pin Terminal/ Lead	Without Oscillator Circuit	—	PS	10	X	○	○	○	○	○	
		Without Oscillator Circuit	—	PB	10	X	○	○	○	○	○	
Piezoelectric Receiver	Lead	Without Oscillator Circuit	—	RU	10	X	○	○	○	○	○	

Piezoelectronic Products

Categories		Series			Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
Ceramic Filters	Lead	10.7MHz	—	FFE	10	X	○	○	○	○	○	
Ceramic Discriminators	Lead	10.7MHz	—	FCD	10	X	○	○	○	○	○	
Ceramic Resonators	SMD	16.93 to 50MHz	—	CCR	10	X	○	○	○	○	○	
	Lead	3.58 to 50MHz	—	FCR	10	X	○	○	○	○	○	

Recording/ Reproducing Heads

Categories		Series			Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks	
Magnetic Recording Heads	For GMR/PMR HDD	Wireless HGA	130Gbps	—	e	○	○	○	○	○	○		
	For TMR Composite HDD	Wireless HGA	100Gbps	—	e	○	○	○	○	○	○		
	For GMR Composite HDD	Wireless HGA	80Gbps	—	e	○	○	○	○	○	○	○	
			60Gbps	—	e	○	○	○	○	○	○	○	
			45Gbps	—	e	○	○	○	○	○	○	○	
	For VCR	1/2 inch	For Audio Control and Audio Erasing	—	—	Information varies according to product.						Please contact us for more details.	
			Low Cost Full Track Erase Head for VCR	—	—	Information varies according to product.						Please contact us for more details.	
For FDD	3.5 inch	—	—	—	e	○	○	○	○	○	○		
Thermal Print Heads	For General Use	Flat Substrate Type	—	—	e	○	○	○	○	○	○		
	For Card, General Use	Convex Substrate Type	New Edged	—	e	○	○	○	○	○	○		
	For Video Printer	Flat Substrate Type	—	—	e	○	○	○	○	○	○		

Power Supplies

Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
AC input	—	—	—	—	Information varies according to product.							Please contact us for more details.
DC to DC Converters	—	—	—	CC-E	10	X	○	○	○	○	○	
	—	—	—	CCK, CCM	10	X	○	○	○	○	○	
	—	—	—	CCN, CCP	Information varies according to product.							Please contact us for more details.
DC to AC Inverters	—	—	—	—	Information varies according to product.						Please contact us for more details.	
Film Solar Cells	Amorphous Silicon Type	Polymer Film	—	BCS	e	○	○	○	○	○	○	

Ceramic Capacitors

Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks	
SMD	General Use	CH, C0G, SL, B, X7R, X5R, F, Y5V/Edc:6.3 to 50V	Size: JIS/IEC 0603 to 5750, EIA 0201 to 2220	C	e	○	○	○	○	○	○		
	Mid Voltage	CH, C0G, B, X7R/Edc: 100 to 630V	Size: JIS/IEC 1608 to 5750, EIA 0603 to 2220	C	e	○	○	○	○	○	○		
	High Voltage	C0G/Edc: 1k to 3kV		Size: JIS/IEC 4520 to 4532, EIA 1808 to 1812	C	e	○	○	○	○	○	○	
		X7R/Edc: 1k to 3kV		Size: JIS/IEC 4520 to 4532, EIA 1808 to 1812	C	e	○	○	○	○	○	○	
	2-chip Piled	X5R, X7R/Edc: 16 to 630V	—	CKG	e	○	○	○	○	○	○	○	
	Low ESL	Ultra Low Inductance	Size: JIS/IEC 2012, EIA 0805	CLL	e	○	○	○	○	○	○	○	
SMD Array	Guaranteed at High Temperature	X8R/Edc: 50 to 100V	Size: JIS/IEC 1608 to 3216, EIA 0603 to 1206	C	e	○	○	○	○	○	○		
	4-element	CH, C0G, B, X7R, X5R, F, Y5V/Edc: 6.3 to 50V	—	CKC	e	○	○	○	○	○	○		
Dipped Radial	2-element	C0G, X7R, X5R/Edc: 6.3 to 50V	—	CKC	e	○	○	○	○	○	○		
	General Use	C0G, B, X7R, X5R, Y5V/Edc: 6.3 to 50V	—	FK	e	○	○	○	○	○	○		
Disk with Lead	Mid Voltage	C0G, X7R/Edc: 100 to 630V	—	FK	e	○	○	○	○	○	○		
	General Use	B, E/Edc: 1kV to 3kV	—	CK45	Information varies according to product.							Please contact us for more details.	
	Low Dissipation at High Frequency	SL/Edc: 1kV to 3kV		—	CC45	e	○	○	○	○	○	○	
		R/Edc: 1kV to 3kV		—	CK45-RR	10	X	○	○	○	○	○	
		B/Edc: 1kV to 3kV		—	CK45-RB	10	X	○	○	○	○	○	
Safety Standard Approved	B, E/Eac: 250V		European Class II Safety Standards Conformance	CD	Information varies according to product.							Please contact us for more details.	
	B, F, E/Eac: 250V		—	CS	Information varies according to product.							Please contact us for more details.	
Disk with Metal Fitting Type Electrode	Ultra High Voltage	Eac: 8 to 20kV		Flat Electrode Type	TSF/H, GA	Information varies according to product.						Please contact us for more details.	
		Eac: 15 to 40kV		Screw Fix Type	FD	10	X	○	○	○	○	○	
		Eac: 15 to 40kV		Screw Fix Type	UHV, FHV	10	X	○	○	○	○	○	
Disk Feed Through	For Magnetron	Eac: 10kV	Lead + Faston Electrode	HFC	e	○	○	○	○	○	○		

Inductors (Coils)

Categories			Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks	
For High Frequency (Multilayer)		1 to 33nH	100 to 300mA	MLK0603	e	○	○	○	○	○		
		1 to 100nH	50 to 300mA	MLK1005	e	○	○	○	○	○		
		1 to 56nH	50 to 300mA	MLG0603	e	○	○	○	○	○		
		1 to 270nH	100 to 1000mA	MLG1005	e	○	○	○	○	○		
			200 to 600mA	MLG1608	e	○	○	○	○	○		
For Signal Line (Multilayer, Magnetic Shielded)		0.1 to 12μH	10 to 200mA	MLF1608-J	e	○	○	○	○	○		
			15 to 300mA	MLF2012-J	e	○	○	○	○	○		
		01 to 2.2μH	10 to 25mA	MLF1005	e	○	○	○	○	○		
		0.047 to 33μH	1 to 50mA	MLF1608	e	○	○	○	○	○		
		0.047 to 100μH	2 to 300mA	MLF2012	e	○	○	○	○	○		
For Signal Line (Wound)		0.01 to 100μH	60 to 530mA	NLV25-PF	10	X	○	○	○	○		
		0.12 to 0.82μH	280 to 550mA	NLHV25-PF	10	X	○	○	○	○		
		0.01 to 470μH	25 to 450mA	NLV32-PF	10	X	○	○	○	○		
		1 to 1,000μH	30 to 450mA	NL453232-PF	10	X	○	○	○	○		
		1,200 to 10,000μH	25 to 75mA	NL565050-PF	10	X	○	○	○	○		
SMD		1 to 10μH	40 to 150mA	MLZ1608	e	○	○	○	○	○		
			60 to 220mA	MLZ2012	e	○	○	○	○	○		
		1.5 to 22μH	330 to 1,200mA	VLF3010A	e	○	○	○	○	○		
			220 to 1,200mA	VLF3012A	e	○	○	○	○	○		
		1.5 to 47μH	360 to 1,800mA	VLF4012A	e	○	○	○	○	○		
			500 to 1,000mA	VLF4012-A2	e	○	○	○	○	○		
		3.3 to 10μH	900 to 1,200mA	VLF4014A	e	○	○	○	○	○		
		4.7 to 10μH	970 to 1,700mA	VLF5014A	e	○	○	○	○	○		
		4.7 to 15μH										
		1.0 to 330μH	670 to 11,900mA	VLF10040	e	○	○	○	○	○		
			700 to 13,500mA	VLF10045	e	○	○	○	○	○		
		1.8 to 330μH	1,000 to 14,600mA	VLF12060	e	○	○	○	○	○		
		1.6 to 47μH	340 to 2,420mA	VLCF4018-2	e	○	○	○	○	○		
		1.8 to 100μH	260 to 2,370mA	VLCF4020	e	○	○	○	○	○		
			270 to 2,750mA	VLCF5020	e	○	○	○	○	○		
		For Power Line (Multilayer, Magnetic Shielded)	2.2 to 47μH	510 to 2,760mA	VLCF5020-1	e	○	○	○	○	○	
			1 to 47μH	50 to 360mA	GLFR1608	e	○	○	○	○	○	
			1 to 22μH	60 to 220mA	GLF1608	e	○	○	○	○	○	
				60 to 550mA	GLFR2012	e	○	○	○	○	○	
			1 to 100μH	50 to 400mA	GLF2012	e	○	○	○	○	○	
			85 to 850mA	GLCR2012	e	○	○	○	○	○		
		1 to 100μH	40 to 455mA	NLFV25-PF	10	X	○	○	○	○		
		1 to 1,000μH	15 to 500mA	NLFC322522-PF	10	X	○	○	○	○		
		1 to 330μH	45 to 800mA	NLFC453232-PF	10	X	○	○	○	○		
		1.2 to 22μH	900 to 4,300mA	LTF5022	e	○	○	○	○	○		
		4.7 to 100μH	330 to 1,800mA	SLF6025-PF	e	○	○	○	○	○		
			420 to 2,500mA	SLF6028-PF	e	○	○	○	○	○		
		3.3 to 47μH	540 to 1,600mA	SLF7028-PF	e	○	○	○	○	○		
		3.3 to 100μH	350 to 1,800mA	SLF7030-PF	e	○	○	○	○	○		
		3.3 to 1,000μH	130 to 1,900mA	SLF7032-2PF	e	○	○	○	○	○		
			140 to 2,500mA	SLF7045-PF	e	○	○	○	○	○		

Products Conforming with China RoHS



Categories			Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
SMD	For Power Line (Multilayer, Magnetic Shielded)	3.3 to 1,500μH	220 to 3,700mA	SLF10145-PF	e	○	○	○	○	○	
		6 to 1,500μH	290 to 3,600mA	SLF12555-PF	e	○	○	○	○	○	
		2 to 220μH	1,000 to 6,200mA	SLF12565-PF	e	○	○	○	○	○	
		1.2 to 330μH	1,000 to 8,200mA	SLF12575-PF	e	○	○	○	○	○	
		1 to 6.8μH	2,800 to 6,400mA	RLF7030	e	○	○	○	○	○	
		1.9 to 10μH	5,100 to 10,600mA	RLF12545-PF	e	○	○	○	○	○	
		1 to 10μH	7,500 to 14,400mA	RLF12560	e	○	○	○	○	○	
	For Power Line (Wound)	1.8 to 15μH	380 to 1,360mA	VLP4610	e	○	○	○	○	○	
		1 to 22μH	340 to 2,300mA	VLP4612	e	○	○	○	○	○	
			270 to 1,430mA	VLP4614	e	○	○	○	○	○	
		2.7 to 47μH	290 to 1,260mA	VLP5610	e	○	○	○	○	○	
			320 to 1,550mA	VLP5612	e	○	○	○	○	○	
		3.3 to 150μH	190 to 1,530mA	VLP5614	e	○	○	○	○	○	
		2.7 to 68μH	400 to 1,800mA	VLP6214	e	○	○	○	○	○	
1 to 33μH		120 to 475mA	NLCV25-PF	10	X	○	○	○	○	○	
1 to 330μH		70 to 1,000mA	NLCV32-PF	10	X	○	○	○	○	○	
0.1 to 10μH		600 to 2,850mA	NLCV32-PFR	10	X	○	○	○	○	○	
1 to 330μH	90 to 1,050mA	NLC453232-PF	10	X	○	○	○	○	○		
1 to 1,000μH	85 to 1,800mA	NLC565050-PF	10	X	○	○	○	○	○		
Transponder Coil	2.61 to 7.20mH	26 to 50Ω	TPL	e	○	○	○	○	○		
Radial Lead	For Signal Line	0.22 to 470μH	76 to 800mA	EL0405-2PF, EL0405-3PF	Information varies according to product.						Please contact us for more details.
		0.22 to 2,200μH	48 to 816mA	EL0606-PF	Information varies according to product.						Please contact us for more details.
		10 to 15,000μH	21 to 780mA	EL0607-PF	10	X	○	○	○	○	○
	For Signal Line (Magnetic Shielded)	100 to 56,000μH	18 to 343mA	EL0909-PF	e	○	○	○	○	○	
		0.22 to 680μH	53 to 895mA	ELF0505-PF	10	X	○	○	○	○	○
		0.22 to 2,700μH	43 to 3,200mA	ELF0607-PF	10	X	○	○	○	○	○
		10 to 33,000μH	10 to 795mA	ELF0708-PF	10	X	○	○	○	○	○
		100 to 100,000μH	18 to 580mA	ELF1010-PF	10	X	○	○	○	○	○
		1 to 470μH	230 to 3,000mA	ELC0607-PF	e	○	○	○	○	○	○
		10 to 5,600μH	200 to 9,800mA	SL1215-PF	e	○	○	○	○	○	○
	For Power Line	150 to 2,200μH	600 to 3,000mA	SL1720-PF	e	○	○	○	○	○	○
		470 to 15,000μH	260 to 2,100mA	SL1923-PF	e	○	○	○	○	○	○
		1,000 to 10,000μH	410 to 1,700mA	SL2125-PF	e	○	○	○	○	○	○
		1 to 1,500μH	160 to 6,600mA	TSL0709-PF	e	○	○	○	○	○	○
2.2 to 4,700μH		130 to 5,600mA	TSL0808-PF	e	○	○	○	○	○	○	
1.0 to 15,000μH		120 to 14,000mA	TSL1112-PF	e	○	○	○	○	○	○	
10 to 10,000μH		240 to 12,000mA	TSL1315-PF	e	○	○	○	○	○	○	
Axial Lead	For Signal Line	0.1 to 120μH	85 to 800mA	SP0203-PF, SPT0203-PF, PL0203-PF	Information varies according to product.						Please contact us for more details.
		0.22 to 560μH	85 to 1,150mA	SP0305-PF, SPT0305-PF, PL0305-PF	10	X	○	○	○	○	○
		0.22 to 0.68μH	550 to 880mA	SP0406-ZPF, SPT0406-ZPF, PL0406-ZPF	e	○	○	○	○	○	○
	For Power Line	0.82 to 1,000μH	100 to 980mA	SP0406-PF, SPT0406-PF, PL0406-PF	Information varies according to product.						Please contact us for more details.
		1 to 4,700μH	100 to 5,600mA	SP0508-PF, SPT0508-PF	e	○	○	○	○	○	○

• All specifications are subject to change without notice.

Transformers

Categories		Series		Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
For Power Supplies	For Converters	SMD	—	LDT	e	○	○	○	○	○	
				CST	e	○	○	○	○	○	
	For Switching Power Supplies	Pin Terminal Type	—	SRW	Information varies according to product.						Please contact us for more details.
For Pulse Signal	For LAN	10BASE-2/5/T, 100BASE-T, 1000BASE-T, ATM25	—	TLA	e	○	○	○	○	○	
	For Digital Signal	SMD	—	CPT	10	X	○	○	○	○	
For ISDN S/T Interface	For Inverter	Pin Terminal Type	—	CIT-S	Information varies according to product.						Please contact us for more details.

RF Components

Categories		Series		Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
SAW Duplexer	For Cellular Phones	—	—	DGD	e	○	○	○	○	○	
Dielectric Filters/ Duplexers	For Cellular Phones/ Satellite Radio/ Wireless LAN	—	—	CF	e	○	○	○	○	○	
Duplexers	For Cellular Phones/ Wireless LAN	—	—	DPX	e	○	○	○	○	○	
Antenna Switch Modules	For Cellular Phones/ Wireless LAN	For All Frequency Bands	—	ASM	e	○	○	○	○	○	
Band Pass Filters	For Cellular Phones/ Wireless LAN/ Bluetooth/ Digital Cordless	—	—	DEA	e	○	○	○	○	○	
	For Wireless LAN/ Bluetooth	—	—	DEA	e	○	○	○	○	○	
Low Pass/ High Pass Filters	Low Pass: For Noise Suppression/ Cellular Phones/ PHS/ Wireless LAN, High Pass : For 2400 to 2484MHz	—	—	DEA	e	○	○	○	○	○	
Baluns	For Cellular Phones/ Wireless LAN	—	—	HHM	e	○	○	○	○	○	
Couplers	For Cellular Phones/ Wireless LAN	Single-band	—	HHM22, HHM24, HHM26	e	○	○	○	○	○	
	For Cellular Phones	Dual-band	—	HHM23	e	○	○	○	○	○	
Circulators/ Isolators	For Cellular Phones	PDC	—	QTB	Information varies according to product.						Please contact us for more details.
		CDMA2000/W-CDMA	—	QTB	Information varies according to product.						Please contact us for more details.
	For Cellular Phone Base Stations	—	—	CU	Information varies according to product.						Please contact us for more details.
	Others	—	—	CU	Information varies according to product.						Please contact us for more details.
Antennas	For Wireless LAN/ Bluetooth	Dielectric	—	CABPB	e	○	○	○	○	○	
		Multilayer	—	ANT	e	○	○	○	○	○	
High Frequency Current Superimposition Modules	For Optical Pickup	SMD	—	HFM	Information varies according to product.						Please contact us for more details.

Network Related Products

Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
For LAN	Pulse Trnasformers/ LC Modules	10BASE-2/5/T, 100BASE-T, 1000BASE-T, ATM25	—	TLA	e	○	○	○	○	○	○	
For Wireless LAN	Wireless LAN Mini PCI Module	IEEE802.11a/11g	—	WN-DMP05/J	e	○	○	○	○	○	○	Product Specific for OEM(BtoB)
For Optical Network	Faraday Rotators	For Optical Isolator	—	BFG	10	X	○	○	○	○	○	
		For Optical Magnetic Field Sensor	—	BFG	10	X	○	○	○	○	○	

Display

Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
Organic Electroluminescence Display	Passive Matrix	Mono-color	—	—	e	○	○	○	○	○	○	

Semiconductors

Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
NAND Flash Memory Controller	PCMCIA, ATA Interface Type	For Systems That Use SmartMedia	—	SA	e	○	○	○	○	○	○	
	PCMCIA, ATA Interface Type	For Embedded Systems, Silicon Disk, Compact Flash Card	—	RA3	e	○	○	○	○	○	○	
		For Embedded Systems, Silicon Disk	—	RB4	e	○	○	○	○	○	○	
		Memory Bus Interface Type	For Embedded Systems, Silicon Storage, Flash Memory Modules	—	XR	e	○	○	○	○	○	○

Noise Suppressing Sheets/Magnetic Sheets/Radio Wave Absorbers

Categories				Series	Environment-Friendly Use Period	Pb	Hg	Cd	Cr+6	PBB	PBDE	Remarks
Flexield	For Noise Suppression	—	—	IRL, IRJ, IVM, IRB, IRE	e	○	○	○	○	○	○	
	For RFID Magnetic Sheets	—	—	IRL, IRJ, IVM, IRB, IRE	e	○	○	○	○	○	○	
Radio Wave Absorbers	For Anechoic Chambers /	—	—	IB004	10	X	○	○	○	○	○	
	For Microwave Anechoic Chambers/ Thin Type	—	—	IP, IP-BX, ICM, IS, IS-SM, ICT, IR, ISF, IJ, ITB	e	○	○	○	○	○	○	