KOA SPEER ELECTRONICS, INC.

Certificate Of RoHS Compliance

8-Jan-13
TS-16949
ISO 9001:2008

CERTIFICATE OF COMPLIANCE FOR ROHS AND ROHS 2

European Union Directive 2002/95/EC is known as RoHS, for "restriction of hazardous substances." It required the EU member states to ban the use of six substances—lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr^{6+}), polybrominated biphenyls (PBB), and polybrominated diphenyl ethers (PBDE)—in new electrical and electronic equipment except in specific applications and industries that have been exempt. These exemptions are periodically reviewed and updated.

European Union Directive 2011/65/EU, known as RoHS Recast or RoHS 2, consolidated the original RoHS directive with its later amendments, including changes to the exemption list, and added new procedures and labeling. It has replaced the previous directive as the primary RoHS legislation and has extended it to products that had not been subject to the original directive.

No Koa products use asbestos, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, or polybrominated diphenyl ethers. They are also free of perfluorooctane sulfonates (PFOS) and decabromodiphenyl ethers (deca-BDE), meeting the EU RoHS 2006/122/EC Directive.

A Koa part number includes a designator for the termination material, which is considered by RoHS 2 as one of the solder materials. Those parts with lead-free terminations (any designator other than "L") are RoHS 2 compliant in all industries. Some of these parts may include lead in exempt applications. Please see the annexes for information on which exemptions apply to which series.

All Koa products and backward and forward compatible and may be used in both lead-free and lead-bearing solder processes. All products can withstand 260 °C temperatures for three cycles, have an MSL of 1 (with a recommended two-year shelf life for best practices), and meet J-STD-020C.

Annex I.

The following series are RoHS 2 compliant (without any use of exemptions) for all industries:

AFS	CC	KLC	LPC4235	LPC4545	LR
LR72	NPO	PAP	PGD	PGE	PSB
PSE	PSI	PSN	PSO	PV	PWW
SA	TLRH	X5R	X7R	Y5V	

Annex II.

The following series are RoHS 2 compliant (without any use of exemptions) for all industries when specified with any termination designator other than "L":

AC(X)	BGR	BLR	BPR	BSR	BWR
CCF	CCP	CF	CFP	CFPS	CFS

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CNN	CSR	CW	CWH	CWP	CZB
CZP	DN(X)	JL	KL73	LF	LFF
LP73	LT	LT73	MF	MFS	MHL
MLT	MO	MOS	MRP	MRS	R(X)A
RCS	RCT	RCU	RCW	RD(X)	RD41
RM41	RN41	RN73	RN73H	RNS	RT(X)
RW	SDR	SDS	SF	SPR	ST
TF	TF(X)	TLR	UR73	UR73D	WF
Z					

Annex III.

The following series are RoHS 2 compliant for all industries, using exemption 7(a) ("lead in high melting temperature type solders"), when specified with any termination designator other than "L":

SLF

Annex IV.

The following series are RoHS 2 compliant for all industries, using exemption 7(a) ("lead in high melting temperature type solders") and exemption 7(c)-I ("electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors"), when specified with any termination designator other than "L":

KL32

Annex V.

The following series are RoHS 2 compliant for all industries, using exemption 7(c)-I ("electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors"), when specified with any termination designator other than "L":

BR	CN	CN_A	CNB	CND	CN_H
CN_K	CN_N	CNZ	CPCN	CR	GS
HPC	HV73	KA	KQ	KQC	KQT
LA73	LPC4045	LPC9040E	LPC9040N	LPC10065	LPC12065
MCM	MRGF	NPR	NT73	NV73	NVD
PCF	PN	PT72	RCR	RF	RF26
RF73	RK1	RK1/2	RK1/4	RK26	RK73A
RK73B	RK73G	RK73H	RK73Z	RK92	RKC
RKH	RKL	SDT	SG73	SG73P	SG73S

SL	SLN	SR73	TSL	WK73

Annex VI.

The following series are RoHS 2 compliant for the telecom industry, using exemption 7(a) ("lead in high melting temperature type solders") and exemption 7(b) ("lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications"), when specified with the "L" termination designator:

CCF	SDR	SDS	SLF

Annex VII.

The following series are RoHS 2 compliant for the telecom industry, using exemption 7(a) ("lead in high melting temperature type solders"), exemption 7(b) ("lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications"), and exemption 7(c)-I ("electrical or electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors"), when specified with the "L" termination designator:

KL32

Annex VIII.

The following series are RoHS 2 compliant for the telecom industry, using exemption 7(b) ("lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications"), when specified with the "L" termination designator:

AC(X)	BGR	BLR	BPR	BSR	BWR
CCF	CCP	CF	CFP	CFPS	CFS
CNN	CSR	CW	CWH	CWP	CZB
CZP	DN(X)	JL	KL73	LF	LFF
LP73	LT	LT73	MF	MFS	MHL
MLT	MO	MOS	MRP	MRS	R(X)A
RCS	RCT	RCU	RCW	RD(X)	RD41
RM41	RN41	RN73	RN73H	RNS	RT(X)
RW	SDR	SDS	SF	SPR	ST
TF	TF(X)	TLR	UR73	UR73D	WF
Z					

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Annex IX.

The following series are RoHS 2 compliant for the telecom industry, using exemption 7(b) ("lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications") and exemption 7(c)-I ("electrical or electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors"), when specified with the "L" termination designator:

BR	CN	CN_A	CNB	CND	CN_H
CN_K	CN_N	CNZ	CPCN	CR	GS
HPC	HV73	KA	KQ	KQC	KQT
LA73	LPC4045	LPC9040E	LPC9040N	LPC10065	LPC12065
MCM	MRGF	NPR	NT73	NV73	NVD
PCF	PN	PT72	RCR	RF	RF26
RF73	RK1	RK1/2	RK1/4	RK26	RK73A
RK73B	RK73G	RK73H	RK73Z	RK92	RKC
RKH	RKL	SDT	SG73	SG73P	SG73S
SL	SLN	SR73	TSL	WK73	

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