



Lead Free Certification and RoHS Compliance

International Resistive Company - IRC
 Corpus Christi TX USA
 telephone: 361.992.7900
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Rev: April 2, 2009

Description	Ceramic Ball Grid Term Array	Thin Film Precision Dip Network	Thin Film Flat Pack Resistors	SOIC Networks	High Voltage Chip Resistors	Thick Film Current Sense	Thick Film Current Sense	3 Watt Current Sense	Ultra Low Resist Jumper	Mini Current Sense
Product Series	CHC	DIP	FP	GUS-SOIC	HVC	LRC-LR	LRC-LRF	LRC-LRF3W	LRC-LRZ	LVC
Product Models	CC0910XLF CD0910XLF CD0865XLF CD1065XLF CB0565XLF	19xxLF	898xLF 899xLF	QSxxLF SSxxLF	HVC	LRxxxxLF	LRFxxxxLF	LRF3WLF	LRZxxxxLF	LVCxxxxLF
TIMELINE										
Scheduled Transition Date Code (Date that manufacturing will shift to lead free.)	0501	0501	0501	0501	0501	0501	0501	0501	0501	0501
Discontinuation Date Code For Tin-Lead Finish (YYWW) (Date after which no tin-lead will be manufactured.)	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned
Lead-Free finish	SAC Alloy	Gold over nickel or HSD with SAC alloy	Gold over nickel or HSD with SAC alloy	Matte tin over copper alloy	Matte tin over nickel	Matte tin over nickel	Matte tin over nickel	Matte tin over nickel	Matte tin over nickel	Matte tin over nickel
REFLOW CONDITIONS										
Peak Reflow Temperature (°C)	260°C	260°C	260°C	260°C	260°C	260°C	260°C	260°C	260°C	260°C
Time (seconds)	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.
MSL in accordance with J-STD 020C	1	1	1	2	1	1	1	1	1	1
COMPONENT AND PACKAGE MARKING										
Component Marking (Pb Free Indicator)	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned
Packaging Marking (Pb Free Indicator on reel, tube, etc.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RoHS Compliance including DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 and DIRECTIVE 2003/11/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 February 2003	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Exemption 5 to RoHS. Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.	Not required	Not required	Not required	Not required	5	5	Not required	5	Not required	Not required
Exemption 7a to RoHS. Lead in high melting temperature type solders (i.e. tin-lead solder alloys containing more than 85 % lead).	Not required	Not required	Not required	Not required	Not required	Not required	Not required	Not required	Not required	Not required
RESTRICTED SUBSTANCES										
Reference: EIA/EICTA/GPSSI Joint Industry Guide-Material Composition Declaration Guide	See Material Declaration Sheet for more detail.									
LEVEL-A:	None	None	None	None	Lead (Ex 5)	Lead (Ex 5)	None	Lead (Ex 5)	None	None
LEVEL-B:										
Nickel (Ni)	0	0	0	0	0	0	0	0	0	0
Antimony	0	0	0	0	0	0	0	0	0	0
Bismuth	0	0	0	0	0	0	0	0	0	0
Brominated Flame Retardants (other than PBBs or PBDEs)	0	0	0	0	0	0	0	0	0	0

** RoHS-compliant components must be specified with appropriate part numbers.
 *** Many IRC components will remain available with Sn/Pb terminations. Consult factory for details.



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Description	Precision Chip Nichrome	Precision Thin Film Chip	Pulse Withstanding Chip	Precision Metal Film Resistor	High Frequency Resistor	3 Watt Chip Resistor	Thin Film Precision SIP Network	Flat Precision Resistor Array	3 & 4 Lead Resistor Network	Power Resistor	Wire Bondable Chip	Thick Film Resistor Array	General Purpose Thick Film	
Product Series	PCF	PFC	PWC	RC	RFH	SCW	SIP	SON	SOT	TFP	WBC	WCA	WCR	
Product Models	PCF-WxxxxLF	PFC-WxxxxLF	PWCxxxxLF	RCxxLF	RFHxxLF	SC3LF	47xxLF	NSxxLF N9xxLF	SOT23LF SOT143LF	MHP 20S MHP 20,35,50 MHP 100, 140 MHP 150,200 SMHP 25	R0202 T0303	WCAxxxxLF	WCRxxxx:LF	
TIMELINE														
Scheduled Transition Date Code (Date that manufacturing will shift to lead free.)	0501	0501	0501	0501	0820	0501	0501	0501	0501	0501	Always lead free	0501	0501	
Discontinuation Date Code For Tin-Lead Finish (YYWW) (Date after which no tin-lead will be manufactured.)	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	
Lead-Free finish	Matte tin over nickel	Matte tin over nickel	Matte tin over nickel	Matte tin over copper alloy	Tin over Nickel	Matte tin over nickel	Gold over nickel or HSD with SAC alloy	Matte tin over nickel	Matte tin over copper alloy	Matte tin over nickel	Matte tin over nickel	Matte tin over nickel	Matte tin over nickel	
REFLOW CONDITIONS														
Peak Reflow Temperature (°C)	260°C	260°C	260°C	260°C	260°C	260°C	260°C	260°C	260°C	260°C	260°C	260°C	260°C	
Time (seconds)	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	10 sec.	
MSL in accordance with J-STD 020C	1	1	1	1	1	1	1	1	1	1	1	1	1	
COMPONENT AND PACKAGE MARKING														
Component Marking (Pb Free Indicator)	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	None Planned	
Packaging Marking (Pb Free Indicator on reel, tube, etc.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
RoHS Compliance including DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 and DIRECTIVE 2003/11/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 February 2003	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Exemption 5 to RoHS. Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.	Not required	Not required	5	Not required	Not required	Not required	Not required	Not required	Not required	Not required	Not required	5	5	
Exemption 7a to RoHS. Lead in high melting temperature type solders (i.e. tin-lead solder alloys containing more than 85 % lead).	Not required	Not required	Not required	Not required	Not required	Not required	Not required	Not required	Not required	7a	Not required	Not required	Not required	
RESTRICTED SUBSTANCES														
Reference: EIA/EICTA/GPSSI Joint Industry Guide-Material Composition Declaration Guide														
LEVEL-A:	None	None	Lead (Ex 5)	None	None	None	None	None	None	None	Lead (Ex 7a)	None	Lead (Ex 5)	Lead (Ex 5)
LEVEL-B:														
Nickel (Ni)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Antimony	0	0	0	0	0	0	0	0	0	0	Yes	Yes	Yes	0
Bismuth	0	0	0	0	0	0	0	0	0	0	0	Yes	Yes	0
Brominated Flame Retardants (other than PBBs or PBDEs)	0	0	0	0	0	0	0	0	0	0	Yes	0	0	0

** RoHS-compliant components must be specified with appropriate part numbers.
 *** Many IRC components will remain available with Sn/Pb terminations. Consult factory for details.