

Date: November 04, 2005

Subject: RoHS Compliance

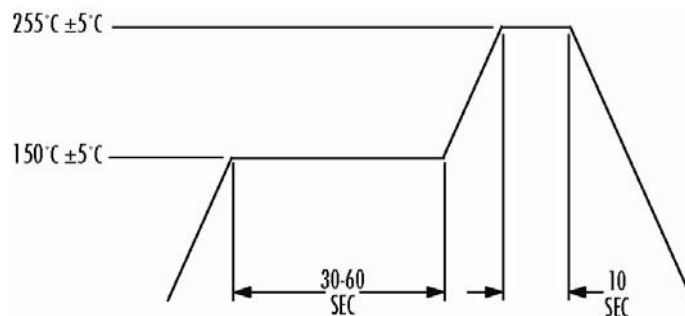
To Whom It May Concern:

Suntsu Frequency Control, Inc. is environmentally conscious and intends to be compliant with the two directives initiated by the EU to better control the management of waste electronic equipment. The two directives are the Waste from Electrical and Electronic Equipment (WEEE) and the Restriction of Hazardous Substances (RoHS). The WEEE addresses the collection and treatment requirements of waste electronic equipment for the member countries. The RoHS sets phase-out dates for the use of lead (Pb) and several other materials contained in electronic products. From July 1st, 2006, RoHS 2002/95/EC states that the targeted materials shall no longer be contained in the electronic products above certain limits unless there is an exemption provided in the rule. In the case of our components lead (Pb) shall be less than 0.1% by weight of the device. The five other restricted substances are listed below:

- Mercury (Hg)
- Cadmium (Cd)
- Hexavalent Chromium (Cr VI)
- Polybrominated Biphenyls (PBB)
- Polybrominated Diphenyl Ethers (PBDE)

Our goal is to provide frequency control devices that are in complete compliance with all lead free regulations well ahead of the timelines imposed by European Union. The majority of our products have been RoHS compliant since December 2004. We still however supply many of our custom/qualified products with lead (Pb). Suntsu data sheets shall identify with the suggested solder reflow profile(s) shown in figure A1. (All Suntsu Pb-free products are backwards compatible to earlier lower temperature reflow profile(s)).

**Figure A1:**



In addition to being specified on our data sheets Suntsu has a Pb-free labeling method for the packaging of all Pb-free products. The lowest level shipping container shall identify the products as Pb-free.

Please see our matrix of standard parts in the following pages to determine if they are RoHS Compliant:

SERIES	DESCRIPTION	RoHS COMPLIANT	
		YES	NO
SCU	HC-49/U	X	
SCS	HC-49/US	X	
SCL	HC-49/US SHORT	X	
SCH	UM-1	X	
SCT1	1.5X5 TUNING FORK WATCH CRYSTAL	X	
SCT2	2X6 TUNING FORK WATCH CRYSTAL	X	
SCT3	3X8 TUNING FORK WATCH CRYSTAL	X	
SCV	HIGH FREQUENCY TUNING FORK	X	
SCW	LOW FREQUENCY TUNING FORK (MULTIPLE SIZES)	X	
SCB	6X3.5 CERAMIC (4 PAD)	X	
SCC	5X7 CERAMIC (4 PAD)	X	
SCD	HC-49/US (2 PAD)	X	
SCF	HC-49/US SHORT (2 PAD)	X	
SCGA(B)	HC-49/US (4 PAD)	X*	
SCGC(D)	HC-49/US SHORT (4 PAD)	X*	
SCJ	5X3.2 CERAMIC (4 PAD)	X	
SCK	4X2.5 CERAMIC (4 PAD)	X	
SCM	3.2X2.5 CERAMIC (4 PAD)	X	
SCP1	3X8 PLASTIC WATCH CRYSTAL (4 PAD)	X	
SCP5	1.4X6.9 PLASTIC WATCH CRYSTAL (4 PAD)	X	
SCP6	1.8X4.9 SMD WATCH CRYSTAL	X	
SCP7	1.5X4.1 SMD WATCH CRYSTAL	X	
SCP8	1.5X3.2 SMD WATCH CRYSTAL	X	
SCQ	2.5X2 CERAMIC (4 PAD)	X	
SCR	2X1.6 CERAMIC (4 PAD)	X	
SCT2G	2X6 GULLWING TUNING FORK WATCH CRYSTAL	X	
SDB	12X5 CERAMIC (4 PAD)	X	
SDD	6X3.5 CERAMIC GLASS SEALED (2 PAD)	X*	
SDE	6X3.5 CERAMIC (2 PAD)	X	
SOF	14 PIN DIP	X*	
SOH	8 PIN DIP	X*	
SOM	HIGH STABILITY 14 PIN DIP	X*	
SON	HIGH STABILITY 8 PIN DIP	X*	
SOV	LOW POWER 14 PIN DIP (2.5V)	X*	
SOW	LOW POWER 8 PIN DIP (2.5V)	X*	
SQF	14 PIN DIP (QUICKTURN)	X	
SQH	8 PIN DIP (QUICKTURN)	X	
SRD	14 PIN DIP (1.8V)	X	
SRF	8 PIN DIP (1.8V)	X	
SOC	5X7 CERAMIC (4 PAD)	X	
SOD	5X3.2 CERAMIC (4 PAD)	X	
SOE	3.2X2.5 CERAMIC (4 PAD)	X	

SERIES	DESCRIPTION	RoHS COMPLIANT	
		YES	NO
SOL	5X7 CERAMIC LOW VOLTAGE (2.5V 4 PAD)	X	
SOP	PLASTIC J-LEAD (4 PAD)	X	
SOR	5X7 CERAMIC LOW FREQUENCY (2.5V LVDS 6 PAD)	X	
SOS	5X7 CERAMIC LOW FREQUENCY (2.5V PECL 6 PAD)	X	
SOT	5X7 CERAMIC LOW FREQUENCY (LVDS 6 PAD)	X	
SOZ	5X7 CERAMIC LOW FREQUENCY (PECL 6 PAD)	X	
SQC	5X7 CERAMIC (QUICKTURN 4 PAD)	X	
SQD	5X3.2 CERAMIC (QUICKTURN 4 PAD)	X	
SQP	PLASTIC J-LEAD (QUICKTURN 4 PAD)	X	
SRB	5X7 CERAMIC (1.8V 4 PAD)	X	
SRG	5X7 CERAMIC HIGH FREQUENCY (PECL 6 PAD)	X	
SRH	5X3.2 CERAMIC (2.5V 4 PAD)	X	
SRJ	5X3.2 CERAMIC (1.8V 4 PAD)	X	
SRK	3.2X2.5 CERAMIC (2.5V 4 PAD)	X	
SRL	3.2X2.5 CERAMIC (1.8V 4 PAD)	X	
SVF	14 PIN DIP	X	
SVH	8 PIN DIP	X*	
SVC	5X7 CERAMIC (6PAD)	X	
SVL	HIGH FREQUENCY 5X7 CERAMIC (PECL 6 PAD)	X	
SVP	PLASTIC J-LEAD	X*	
STG	14 PIN DIP (HCMOS)		X
STH	14 PIN DIP (HCMOS VC)		X
SWG	14 PIN DIP		X
SWH	14 PIN DIP (VC)		X
SWJ	20X20 STRATUM 3 (HCMOS)		X
SWK	20X20 STRATUM 3 (HCMOS VC)		X
SWP	14 PIN DIP STRATUM 3 (HCMOS)		X
SWQ	14 PIN DIP STRATUM 3 (HCMOS VC)		X
SWR	14 PIN DIP STRATUM 3		X
SWS	14 PIN DIP STRATUM 3 (VC)		X
STF	5X3.2 CERAMIC (4 PAD) CLIPPED SINE WAVE	X	
STL	5X3.2 CERAMIC (VC 4 PAD) CLIPPED SINE WAVE	X	
STM	4X2.5 CERAMIC (4 PAD) CLIPPED SINE WAVE	X	
STP	3.2X2.5 CERAMIC (4 PAD) CLIPPED SINE WAVE	X	
STQ	3.2X2.5 CERAMIC (VC 4 PAD) CLIPPED SINE WAVE	X	
STT	5X3.2 CERAMIC (4 PAD) CMOS/TTL	X	
STU	5X3.2 CERAMIC (VC 4 PAD) CMOS/TTL	X	
STV	3.2X2.5 CERAMIC (4 PAD) CMOS/TTL	X	
STW	3.2X2.5 CERAMIC (VC 4 PAD) CMOS/TTL	X	
STY	3.2X2.5 CERAMIC (2.7V 4 PAD) CLIPPED SINE WAVE	X	
STZ	3.2X2.5 CERAMIC (2.7VC 4 PAD) CLIPPED SINE WAVE	X	
SWM	5X3.2 CERAMIC (2.7V 4 PAD) CLIPPED SINE WAVE	X	
SWN	5X3.2 CERAMIC (2.7VC 4 PAD) CLIPPED SINE WAVE	X	

<u>SERIES</u>	<u>DESCRIPTION</u>	<u>RoHS COMPLIANT</u>	
		<u>YES</u>	<u>NO</u>
SWT	3.2X2.5 CERAMIC (2.7V 4 PAD) CMOS/TTL	X	
SWU	3.2X2.5 CERAMIC (2.7VC 4 PAD) CMOS/TTL	X	
SWV	5X3.2 CERAMIC (2.7V 4 PAD) CMOS/TTL	X	
SWW	5X3.2 CERAMIC (2.7VC 4 PAD) CMOS/TTL	X	
SJB	36.1X27.2 OCXO		X
SJC	36.1X27.2 OCXO		X
SJD	20X20 OCXO		X
SJG	25.4X25.4 OCXO		X
SJH	25.4X25.4 OCXO		X
SJI	36.1X27.2 OCXO		X

**X\*: RoHS COMPLIANT while not Pb-Free (RoHS exemption).**