



KWANG SUNG
ELECTRONICS H.K.CO.LIMITED



SPECIFICATION FOR APPROVAL

MESSRS :
MODEL : LINE FILTER
I T E M : TLF-106
CUSTOMER P/N : TLF-106
CUSTOMER MODEL :
D A T E : 2009. 07. 22

APPROVAL		
PREPARE	CHECK	APPROVAL
DATE :		

HEAD OFFICE KWANG SUNG ELECTRONICS H.K CO.,LTD.
UNIT 6-9, 13/F, WAH WAI CENTER, 38-40, AU PUI WAN STREET,
FOTAN, SHATIN, NEW TERRITORIES, HONG KONG
TEL : 852-2946-7600 FAX : 852-2602-6490

R&D CENTER KWANG SUNG ELECTRONICS H.K CO.,LTD. KOREA BRANCH
201, WORLD VENTURE TOWN GO-24, GASAN-DONG
GEUMCHUN-GU, SEOUL, KORE.
TEL : 82-2-2108-3590 FAX : 82-2-2108-3553

KOREA FACTORY KWANG SUNG ELECTRONICS CO.,LTD.
(COIL R&D) 108, 4-KA, WONHYO-RO, YONGSAN-KU, SEOUL, KOREA
TEL : 82-2-713-6001 FAX : 82-2-712-0001

CHINA FACTORY SHEN ZHEN KWANG SUNG ELECTRONICS CO.,LTD.
SHI TOU SHAN INDUSTRIAL ZONE,
ZHUAN CHANG VILLAGE, SHI YAN TOWN,
BAO AN DISTRICT, SHEN-ZHEN, GUANG DONG PROVINCE, CHINA
TEL : 86-755-2765-4650 FAX : 86-755-2765-6007



A Name You Can Trust Kwang Sung Electronics Co.,Ltd.

MESSRS: SUH KWANG	LINE FILTER	DATE : 2009. 07. 21
KSE NAME: TLF-106	SPECIFICATION	PRODUCTO CODE NO. 9F5-

1. APPLICATION

This Specification is applied to Inspection and Approval of the COIL-LINE FILTER for Color TV and Monitor, SMPPS whose **SUNG HO ELECTRONICS CORP.**

2. GENERAL PREFERENCE

The reinspection & re approval is required to change the structure, quality, progress of this Specification.

3. ABSOLUTE REGULARITY




- 1) Keep Temperature : -25 85
- 2) Keep Humidity : 20% 95%
- 3) Use Temperature : -10 70
- 4) Use Humidity : 20% 85%

4. MECHANICAL CHARACTERISTIC

- 1) TERMINAL TENSION INTENSITY
After fix the Body The Terminal Shall withstand for 5seconds without losing when a static load of 2.0kg is applied to drawing direction of the Terminal.
- 2) TERMINAL BEND INTENSITY
The Terminal shall withstand without losing and shortage when return after bend 1 time to the left side and 1 time right side with a static load.
- 3) VIBRATION TEST
After fix a Body of the Vibration Board The Terminal shall withstand without losing and bend when operate Vibration Test of 3 directions(X,Y,Z) for 2hours.
- Frequency : 10 - 55Hz
- Amplitude : 0.7mm

5. ELECTRICAL CHARACTERISTIC

- 1) INSULATION RESISTANCE
Primary COIL TO CORE : Shall be more than
Primary COIL to Secondary COIL : Shall be more than
Secondary COIL TO CORE ; Shall be more than
100M when measured with DC500V.
- 2) WITHSTAND VOLTAGE
COIL TO COIL : Shall be no damage when measured AC1.5KV, 10mA for 1 SEC.
COIL TO CORE : Shall be no damage when measured AC1.5KV, 10mA for 1 SEC.

 KWANG SUNG ELECTRONICS H.K.CO.,LTD.	DRAWN	DESIGNED	CHECKED	APPROVED
	 2009.07.22 金鎮佑			 2009.07.22 朴鍾奎

MESSRS: SUH KWANG

LINE FILTER

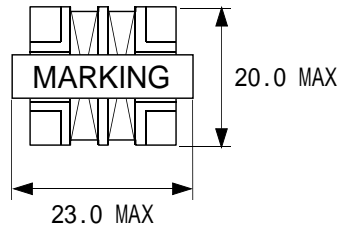
DATE : 2009. 07. 21

KSE NAME: TLF-106

SPECIFICATION

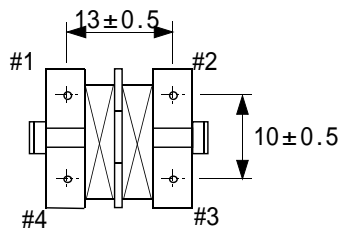
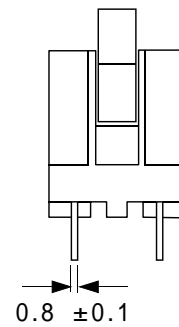
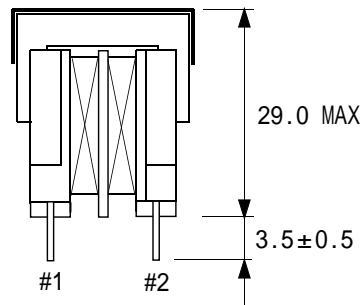
PRODUCTO CODE NO.
9F5-

6. DIMENSION (UNIT:mm)



MARKING(WHITE or SILVER)

TLF-106



MESSRS: SUH KWANG

LINE FILTER

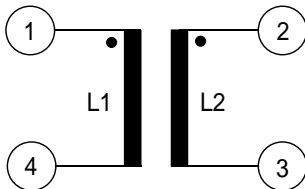
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7. SCHEMATIC DIAGRAM



WINDING	#1, #4 VIEW	C.W
BOBBIN INSERT	#2 #3 SIDE INSERT	
N.C PIN		
REMOVE PIN		

8. WINDING SPECIFICATION

NO	TERMINAL NO		WINDING		
	START	FINISH	WIRE	TURNS	METHOD
L1	1	4	2UEW 0.40Ø	77 Ts(REF.)	RANDOM SOLENOID
L2	2	3	2UEW 0.40Ø	77 Ts(REF.)	RANDOM SOLENOID

* REGARDING ABOVE TABLE STANDARD, THICKNESS OF WIRE MUST BE OVER SPECIFICATION.

* **L1, L2**

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9. ELECTRICAL CHARACTERISTIC

NO	ITEM	TERMINAL	SPECIFICATION	REMARKS
1	INDUCTANCE	1 - 4	10.0 mH MIN.	LCR METER 4284A (HP) at 1kHz, 1.0Vrms.
		2 - 3	10.0 mH MIN.	
2	DIFFERENCE INDUCTANCE	L1 - L2	500 uH MAX.	
3	DC RESISTANCE	1 - 4	1.0 MAX.	DC.R METER GOM-801G(GW)
		2 - 3	1.0 MAX.	
4	WITHSTANDING VOLTAGE	COIL - COIL	AC1.5kVrms, 1 MIN.	TOS-8850 CUT OFF CURRENT (10mA) 60Hz
5	INSULATION RESISTANCE	COIL - COIL	DC500V, 100MΩ MIN.	TOS-8850

* TEST CONDITION : TEMPERATURE 20 ± 5 , HUMIDITY 65%± 20%

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10. RELIABILITY TEST()

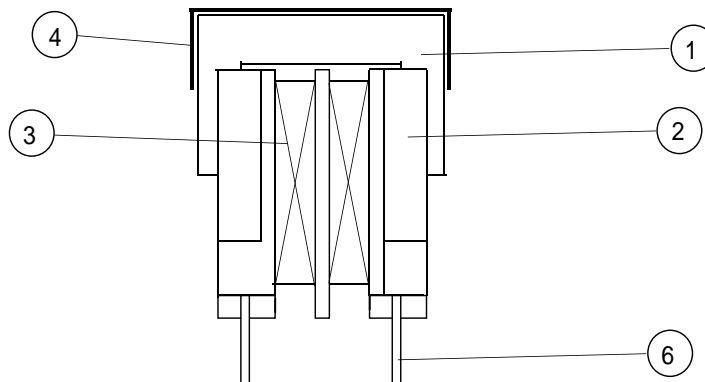
ITEM	TEST CONDITION	SPEC
(HUMIDITY-RESISTANCE)	TEMPERATURE: 40 ± 2 , HUMIDITY: 90 95%RH, TIME: 96HR	INITIAL INDUCTANCE $\pm 10\%$
	60 (UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)	
(HEAT SHOCK - RESISTANCE)	-40 1HR 85 1HR : 10 CYCLES	INITIAL INDUCTANCE $\pm 10\%$
	60 (UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)	
(HEAT-RESISTANCE)	TEMPERATURE: 70 ± 2 , TIME: 96HR	INITIAL INDUCTANCE $\pm 10\%$
	60 (UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER KEEPING MORE THAN 60 MINUTES.)	
(COLD-RESISTANCE)	TEMPERATURE: -10 ± 2 , TIME: 96HR	INITIAL INDUCTANCE $\pm 10\%$
	60 (UNDER THE CONDITION OF NORMAL TEMPERATURE MEASURING DATA AFTER LEAVING MORE THAN 60 MINUTES.)	

11. ENDURANCE TEST()

ITEM	TEST CONDITION	SPEC
SOLDERING (ADHESION)	SOLDER POT : 280 ± 5 SOLDERING HR : 2 ± 0.5 SEC	MORE THAN 90%
SOLDERING (HEAT RESISTANCE)	SOLDERING : 260 ± 5 SOLDERING HR : 10 ± 1.0 SEC	MORE THAN 90%

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12. CONSTRUCTION



13. LIST OF MATERIAL

NO	COMPONENT	NAME OF MATERIAL	MANUFACTURER OF MATERIAL	UL FILE NO
1	CORE	HM3A UU1620 R7K UU1620 SM-70S UU1620 TL-7 UU1620 OR EQUIV.	ISU CERAMICS CO.,LTD. DMEGC MAGNETICS CO.,LTD. SAMWHA ELECTORNICS CO.,LTD. TIAN TONG ELECTRONICS CO.,LTD. OR EQUIV.	
2	BOBBIN	PHENOLIC 94V-0 UU1620 4P	HEXION SPECIALTY CHEMICALS GMBH SUMITOMO BAKELITE CO.,LTD. CHANG CHUN PLASTICS CO.,LTD.	E61040(M) E41429(M) E102761(S)
3	WIRE	2UEW 0.40Ø	HOILEUN ELECTRICAL CO.,LTD. DONGYANG ELECTRONICS CO.,LTD.	E164409(S) E102761(N)
4	CLAMP	STAINLESS STEEL	POONGSAN METAL CP.,LTD.	
5	VARNISH	ES925-43DA, B SR-337A, B DVB-2085	CHEM TECH CO.,LTD. SEKYE CHEMICAL CO.,LTD. NOROO PAINT & COATINGS CO.,LTD.	E257443 E258329 E93947
6	PIN	SDCP (SOLDER DIPPED COPPER COVER STEEL WIRE) 0.8	SAMATRON CO., LTD.	
7	SOLDER	BAR, WIRE (Sn 98%,CU 2%)	SAMWOO ALLOY METALIND .CO.,LTD.	
8	FLUX	JS-7000S2 KS-PBF-G	KOKI SANEI KOREA CO.,LTD.	

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*** YELLOW CARD**

HEXION SPECIALTY CHEMICALS GMBH
POSTFACH 7154
58609 ISERLOHN-LETMATHE, GERMANY

E61040(M)

Material Dsg	Color	Min. Thk mm	UL94 Flame Class	Elec	RTI		H W I	H A I	H V T R	D 4 9 5	C T I
					With Imp	Mech W/o str					
<u>PF 2736(a)(b)</u>	BK	0.46	V-0	-	-	150	150	150	0	5	3
	ALL	0.81	V-1	0	2	150	150	150			
	NC,GN,BK	0.81	V-0	0	2	150	150	150			
	ALL	1.5	V-0	0	2	150	150	150			
		3.0	V-0	0	2	150	150	150			

(a) - Optional Suffix "H".

(b) - Grade designation may be followed by a four digit number representing color, P or S indicating type of molding, a single digit representing slight color variation.

Marking: Company name or tradename "BAKELITE" , "RUTAFORM" and material designation on container, wrapper or finished part.

SUMITOMO BAKELITE CO LTD
5-8 HIGASHI-SHINAGAWA 2-CHOME SHINAGAWA-KU
TOKYO 140-0002, JAPAN

E41429(M)

BOBBIN

Material Dsg	Color	Min. Thk mm	Flame Class	H W I	H A I	RTI		H V T R	D 4 9 5	C T I	
						Elec	Mech Imp Str				
<u>PM-9820</u>	BK	0.16	V-0	-	-	150	150	150	0	5	3
		0.51	V-0	3	1	150	150	150			
	BN	0.18	V-0	-	-	150	150	150			
		0.70	V-0	1	2	150	150	150			
		1.5	V-0	0	2	150	150	150			
		3.0	V-0	0	2	150	150	150			

Phenolic (PF), "Sumikon", furnished as pellets, granular material.

CHANG CHUN PLASTICS CO LTD
7TH FL 301 SONGKIANG RD
TAIPEI, TAIWAN

E59481(S)

Material Dsg	Color	Min. Thk mm	Flame Class	H W I	H A I	RTI		H V T R	D 4 9 5	C T I	
						Elec	Mech Imp Str				
<u>T-355J</u>	BK	0.62	V-0	1	0	150	150	150	2	5	3
		0.75	V-0	1	0	150	150	150			
		1.0	V-0	1	0	150	150	150			

Marking: Company name or tradename "LONGLITE" , "SUMIKON" and material designation on container, wrapper or finished part.

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*** YELLOW CARD**

VARNISH	<p>SE KYE CHEMICAL CO LTD E257443 360 GUIJEON-RI, TONGJIN-EUP KIMPO-SI, KYUNGGI-DO 415-862 REPUBLIC OF KOREA</p> <table border="0"> <tr> <td>Varnish</td> <td>ANSI</td> <td colspan="3">Varnish</td> </tr> <tr> <td>Dsg</td> <td>Magnet</td> <td colspan="3">Thermal Class C</td> </tr> <tr> <td></td> <td>Wire Type</td> <td>TP</td> <td>HC</td> <td>CE</td> </tr> <tr> <td>SR-337(#)</td> <td>MW75</td> <td>130</td> <td>130</td> <td>-</td> </tr> </table> <p># - May be followed by 1 or 2 suffix numeric and /or alpha characters to denote viscosity change accomplished via solvents due to production tolerance. Marking: Company name and varnish designation on shipping container.</p>	Varnish	ANSI	Varnish			Dsg	Magnet	Thermal Class C				Wire Type	TP	HC	CE	SR-337(#)	MW75	130	130	-														
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SR-337(#)	MW75	130	130	-																															
<p>CHEM TECH CO LTD E258329 PYONGTACK-INDUSTRIAL COMPLEX 538-6 SEGYO DONG PYONGTACK-SHI, KYUNGGI-DO 450-100 REPUBLIC OF KOREA</p> <table border="0"> <tr> <td>Varnish</td> <td>ANSI</td> <td colspan="3">Varnish</td> </tr> <tr> <td>Dsg</td> <td>Magnet</td> <td colspan="3">Thermal Class C</td> </tr> <tr> <td></td> <td>Wire Type</td> <td>TP</td> <td>HC</td> <td>CE</td> </tr> <tr> <td>ES925-43D#</td> <td>MW75</td> <td>130</td> <td>130</td> <td>-</td> </tr> </table> <p># - May be followed by 1 or 2 suffix numeric and /or alpha characters to denote viscosity change accomplished via solvents due to production tolerance. Marking: Company name and varnish designation on shipping container.</p>	Varnish	ANSI	Varnish			Dsg	Magnet	Thermal Class C				Wire Type	TP	HC	CE	ES925-43D#	MW75	130	130	-															
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ES925-43D#	MW75	130	130	-																															
<p>NOROO PAINT & COATINGS CO LTD E93947 615 PAKDAL-DONG, ANYANG-SHI, KYONGGI-DO 430-030 REPUBLIC OF KOREA</p> <table border="0"> <tr> <td>Varnish</td> <td>ANSI</td> <td colspan="3">Varnish</td> </tr> <tr> <td>Dsg</td> <td>Magnet</td> <td colspan="3">Thermal Class C</td> </tr> <tr> <td></td> <td>Wire Type</td> <td>TP</td> <td>HC</td> <td>CE</td> </tr> <tr> <td>DVB-2148L</td> <td>MW5</td> <td>155</td> <td>155</td> <td>-</td> </tr> <tr> <td>DVB-2148L(*)</td> <td>MW5</td> <td>155</td> <td>155</td> <td>-</td> </tr> <tr> <td>DVB-2085(*)</td> <td>MW28</td> <td>130</td> <td>130</td> <td>-</td> </tr> <tr> <td>DVB-2177(@)</td> <td>MW5</td> <td>180</td> <td>200</td> <td>-</td> </tr> </table> <p>(*) = To be followed by 1 or 2 numbers and/or 1 or 2 letters. (@) = May be followed by suffix XX in which XX represents percentage of solid content. Marking: Company name and varnish designation on shipping container.</p>	Varnish	ANSI	Varnish			Dsg	Magnet	Thermal Class C				Wire Type	TP	HC	CE	DVB-2148L	MW5	155	155	-	DVB-2148L(*)	MW5	155	155	-	DVB-2085(*)	MW28	130	130	-	DVB-2177(@)	MW5	180	200	-
Varnish	ANSI	Varnish																																	
Dsg	Magnet	Thermal Class C																																	
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DVB-2148L(*)	MW5	155	155	-																															
DVB-2085(*)	MW28	130	130	-																															
DVB-2177(@)	MW5	180	200	-																															
WIRE	<p>HOI LUEN ELECTRICAL MFR CO LTD E164409 BLK B, 8TH FL, UNIT 1, HOI LUEN IND CENTRE KWUN TONG, 55 HOI YUEN RD, KOWLOON, HONG KONG</p> <table border="0"> <tr> <td>Mtl Dsg</td> <td>Coating Type</td> <td>ANSI Type</td> <td>TI</td> </tr> <tr> <td></td> <td>BC</td> <td>TC</td> <td></td> </tr> <tr> <td>PEW</td> <td>Polyester</td> <td>-</td> <td>MW5C 155</td> </tr> <tr> <td>UEW</td> <td>Polyurethane</td> <td>-</td> <td>MW28-C 130</td> </tr> <tr> <td>EIW</td> <td>Polyester-imide</td> <td>-</td> <td>MW30-C 180</td> </tr> <tr> <td>UEW-F</td> <td>Polyurethane</td> <td>-</td> <td>MW79-C 155</td> </tr> </table> <p>Marking: Company name and material designation on package or reel and Recognized Component Mark</p>	Mtl Dsg	Coating Type	ANSI Type	TI		BC	TC		PEW	Polyester	-	MW5C 155	UEW	Polyurethane	-	MW28-C 130	EIW	Polyester-imide	-	MW30-C 180	UEW-F	Polyurethane	-	MW79-C 155										
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<p>DONG YANG ELECTRONICS CO LTD E102761(S) 660-1 BANWOL-RI TAIAN-EUB Hwasung-Gun, KYUNGGI-DO 445-970, KOREA</p> <table border="0"> <tr> <td>Mtl</td> <td>Coat type</td> <td>ANSI</td> <td></td> </tr> <tr> <td>Dsg</td> <td>BC</td> <td>Overcoat</td> <td>Type(+) T1</td> </tr> <tr> <td>NY-UEW</td> <td>Polyurethane</td> <td>Polyamide</td> <td>MW28 130</td> </tr> <tr> <td>UEW</td> <td>Polyurethane</td> <td></td> <td>MW75 130</td> </tr> </table> <p>Marking: Company name or "E102761" and material designation or marked designation on package or reel, and Recognized Component Mark.</p>	Mtl	Coat type	ANSI		Dsg	BC	Overcoat	Type(+) T1	NY-UEW	Polyurethane	Polyamide	MW28 130	UEW	Polyurethane		MW75 130																			
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Q.C & PROCESS FLOW CHART

ITEM				COIL-LINE FILTER						
NO	PROCESS			CONTROL POINTS	TOOL	INSPECTION METHOD		REFERENCE STD.	REMARKS	
	MARK	NAME	EQUIPMENT			CHECK METHOD	PART			
1	└▼	INCOMMING CHECK (MATERIAL)	CALIPERS LCR METER PWR. SUPPLY	CORE, B/B, WIRE SIZE CORE AL VALUE WIRE PIN HOLE	CALIPERS LCR METER PWR. SUPPLY	SAMPLING (at INCOMMING)	I.Q.C	INSPECTION STD.		
2	▼	WINDING	WINDING MACHINE	NUMBER OF TURNS WINDING STATUS INSULATION STATUS CONNECTION STATUS	LONG NOSE NIPPER		WINDING PART	WORKING STD.		
3	▼	SOLDERING	SOLDER POT (Sn100%)	TEMPERATURE TIME	THERMOMETER TIMER	2 TIME/1 DAY	SOLDER PART	WORKING STD.	CHECK SHEET	
4	▼	ASS`Y		CORE, BASE, GEAR SIZE ASS`Y STATUS	TAPPING MACHINE	5 PAIR/1 LOT SAMPLING	ASS`Y PART	WORKING STD.		
5	▼	1`ST INSPECTION	LCR METER TURNS, DCR	INDUCTANCE TURNS, DCR	JIG	ALL	INSPECTION PART	INSPECTION STD.		
6	▼	ADHESIVE		ADHESIVE ITEM LOCATION			VARNISH PART	WORKING STD.		
7	▼	DRY	DRY OVEN	DRY TEMPERATURE DRY TIME	THERMOMETER TIMER		VARNISH PART	WORKING STD.		
8	▼	MARKING	MARKING MACHINE (or GUM SEAL)	DIRECTION LOCATION LOT NO	INK or LABEL (BON MARQUE)	ALL	MARKING PART	WORKING STD.		
9	▼	APPEARANCE INSPECTION	PROOF MACHINE	APPEARANCE CHECK P-S INTERVAL PIN TO PIN	BRUSH PROOF JIG	ALL	INSPECTION PART	WORKING STD.		
10	▼	2`ND INSPECTION	SURGE TESTER HI-POT TESTER INSULATION LCR METER DCR METER IMPEDANCE	LAYER SHORT P-S, P-C, S-C INSULATION INDUCTANCE DCR IMPEDANCE	JIG	ALL	INSPECTION PART	INSPECTION STD.	CHECK SHEET	
11	▼	PACKING	INNER BOX OUT PACKAGE	BOX STD. APPEARANCE PACKING STATUS		ALL	INSPECTION PART	WORKING STD.		
12	▼	OUTGOING INSPECTION		L (LEAKAGE), DCR, HI-POT, INSULATION, IMPEDANCE SURGE, DIMENSION QUANTITY, APPEARANCE		SAMPLING G- (AQL=0.65)	O.Q.C	INSPECTION STD.	INSPECTION SHEET	
13	▼	OUTGOING					SALES PART			
REVISION		DATE	REASON	APPROVAL	REVISION	REASON	APPROVAL	KWANGSUNG ELECTRONICS H.K.CO.,LTD. 2008. 07. 25		
										WRITTEN BY

PROCESS MARK : = START = WORK = INSPECTION = END