



# 产品承认书

## SPECIFICATION FOR APPROVAL

**CUSTOMER:** \_\_\_\_\_

**CUSTOMER P/N:** \_\_\_\_\_

**HSW-HG9602D**

**DESCRIPTION:** \_\_\_\_\_

**10/100/1000 BASE-T QUAD PORT THROUGH-HOLE  
MAGNETICS**

**REF NO:** \_\_\_\_\_

**REV/NO:** \_\_\_\_\_

**A/0**

**DATE:** \_\_\_\_\_

**2019-12-5**

**ATTACHMENT:**

■ SPECIFICATION

■ SAMPLE      Q'TY OF SAMPLES \_\_\_\_\_ PCS

	√	CUSTOMER'S SIGNATURE	REMARK
<b>FULL APPROVED</b>			
<b>CONDITIONAL APPROVED</b>			
<b>REJECTED</b>			

**深圳市华升微电子有限公司**

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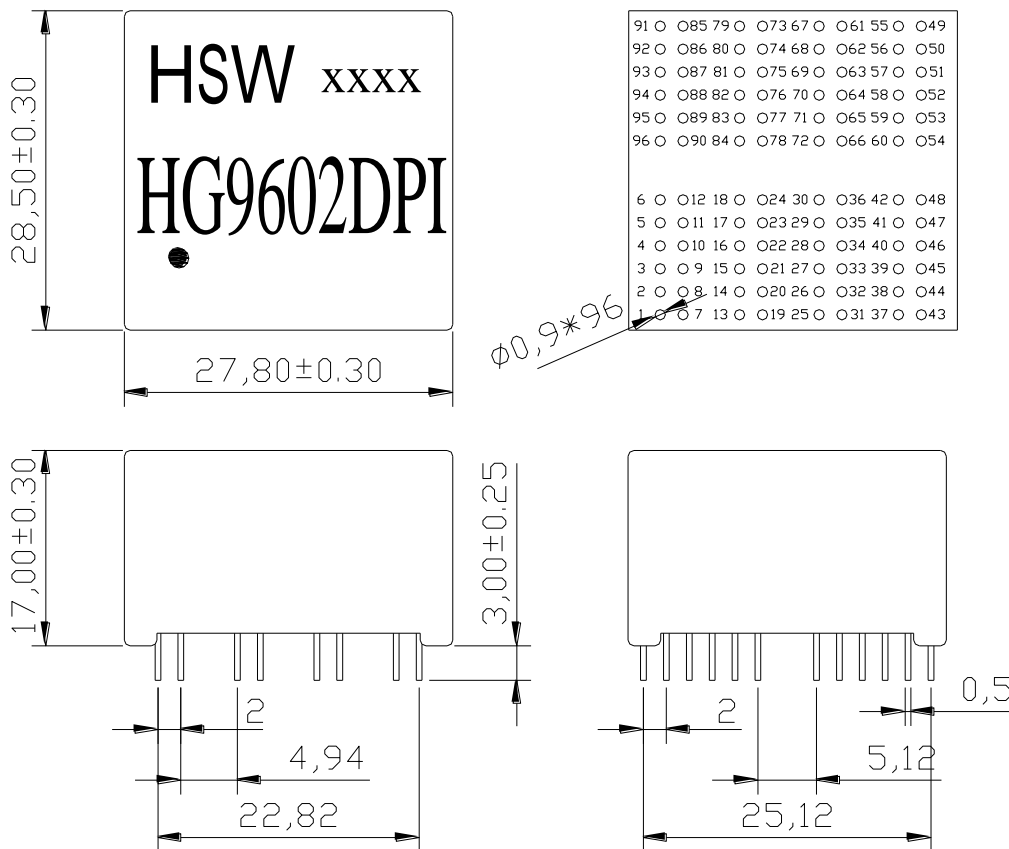
RoHS  
Compliant



# 1. FEATURES:

- 1.1 10/100/1000 BASE-T QUAD PORT THROUGH-HOLE MAGNETICS
- 1.2 Meets IEEE 802.3af & ANSI X3.263 Standards.
- 1.3 Suitable For End-span and Mid-span POE Applications.
- 1.4 RoHS Compliant
- 1.5 Operating Temperature range: -45°C TO +85°C
- 1.6 Storage temperature range: -25°C TO +125°C

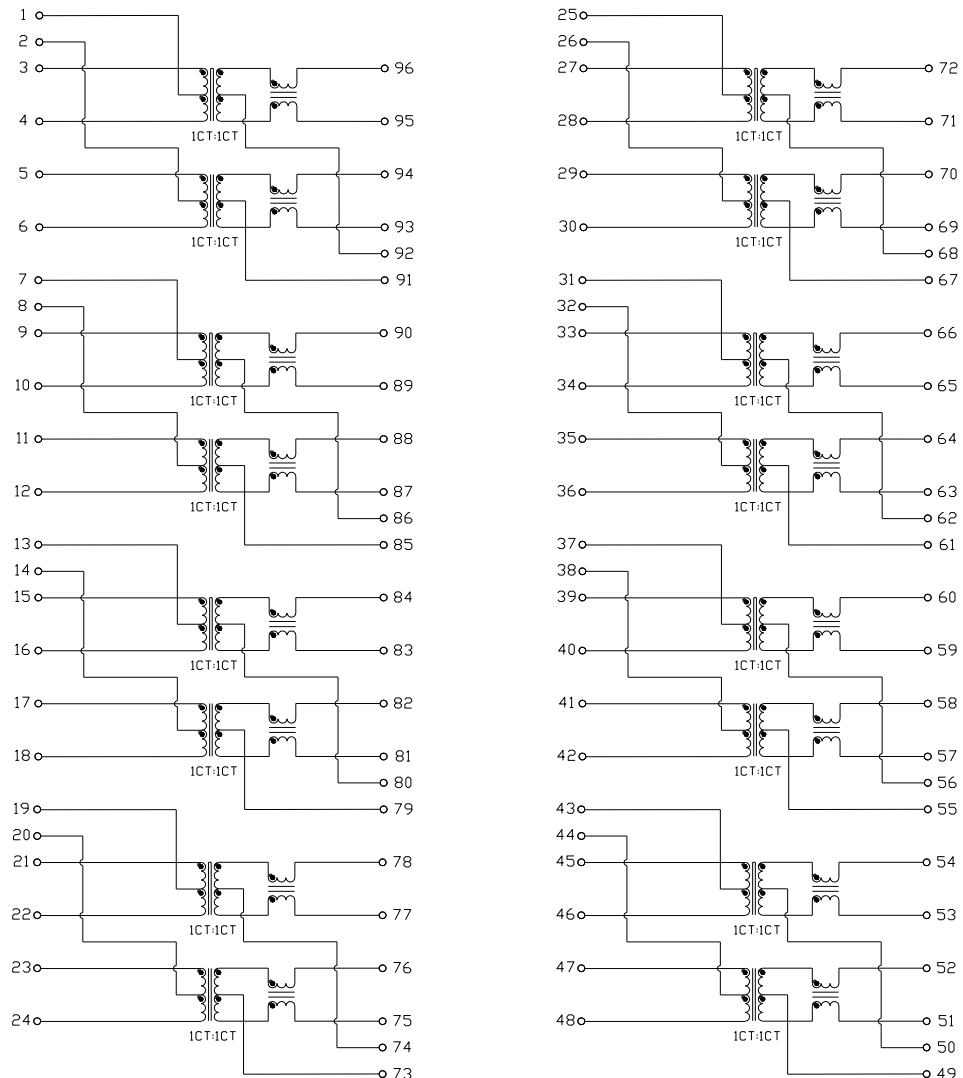
# 2. DIMENSIONS & MARKING



**Note:** 1、 Dimension: mm  
 2、 Unless otherwise specified, all tolerances are:  $\pm 0.05$ mm

DRAWN BY:		CHECKED BY:		APPROVED BY:		CUSTOMER:	
						PART NO. : HG9602D	
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### 3. SCHEMATICS:

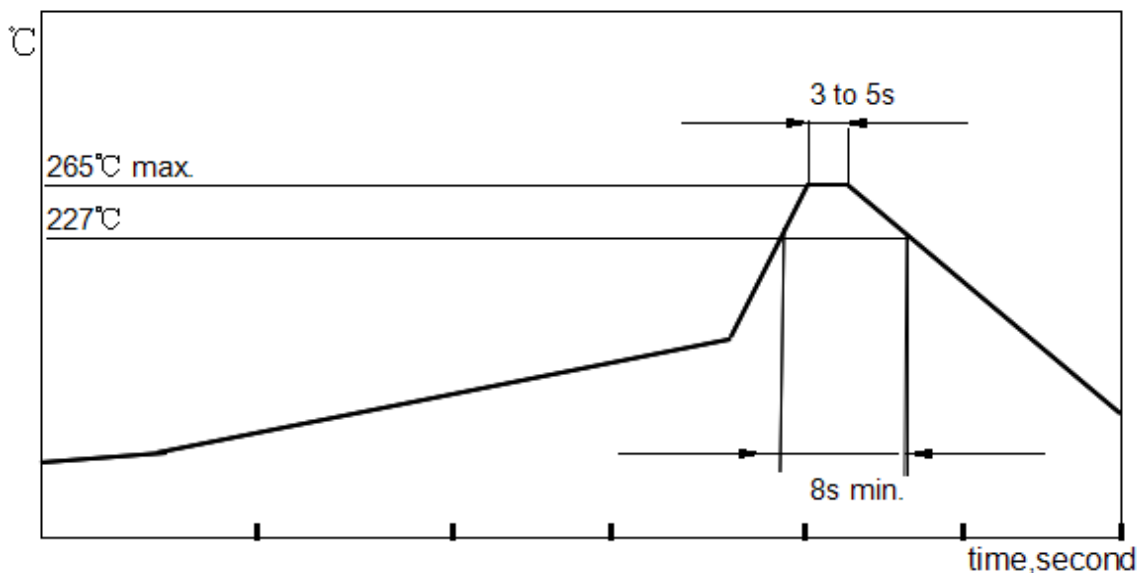


### 4. ELECTRICAL SPECIFICATIONS @ 25 °C

- 4.1 OCL : 350  $\mu$ H Min. @ 100 KHz, 100mV with 8mA DC Bias
- 4.2 Leakage Inductance: 0.5  $\mu$ H Max. @ 100KHz, 0.2V
- 4.3 Cw/w: 35 pF Max. @ 100KHz, 0.2V
- 4.4 DCR: 1.20 $\Omega$  Max.
- 4.5 Turns Ratio( $\pm$ 2%): 1CT:1(TX), 1CT:1(RX)
- 4.6 Insertion Loss: -1.2 dB Max. (TX & RX)@ 1~100 MHz
- 4.7 Return Loss: -16 dB Min @ 0.5-40MHz  
 $-10+20*\log(f/80)$  dB Min @ 40.1-100 MHz
- 4.8 Cross Talk: -50 dB Min. @ 1~10 MHz  
 $-55+22*\log(f/10)$  dB Min. @ 10~100 MHz
- 4.9 Common Mode Rejection : -50 dB Min. @ 2 MHz  
 $-15+20*\log(f/200)$  dB Min. @ 30~200 MHz
- 4.10 Isolation HI-POT: 1500Vrms 1mA 1Second

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## 5. Recommended Lead Free Wave Soldering Curve :



Item	Solder technique simulation	Temperature (°C)	Time(s)	Temperature ramp/immersion and emersion rate
1	Solder iron	350±10 (solder iron temp)	4~5	
2	Vapor phase reflow	215±5 (vapor temp)	10±1	25mm/s±6mm/s
3	Wave: Topside Board-mount product	260±5 (solder temp)	20±1	
4	Wave: Bottomside Board-mount product	260±5 (solder temp)	10±1	Preheat 1°C/s~4°C/s to within 100°C of solder temp 25mm/s±6mm/s
5	Vapor phase reflow	215±5 (vapor temp)	215±5 (vapor temp)	

## 6. Reliability Test Criteria :

6.1 Terminal strength: Pull test withstand 9.8N 60+/-0.5S no looseness or movement.

6.2 Solderability: Dipped in 245°C +/- 5°C molten solder for 3 +/- 0.5 seconds, 95% min shall be smooth any and bright.

6.3 Resistance to soldering heat : Dip in 260°C +/- 5°C molten solder for 5 +/- 0.5 seconds. Shall not be any abnormality.

6.4 Vibration: 1.5mm amplitude total excursion 10-55-10 Hz traversed in 1 minute, x,y,z, axis for 2 hours. Shall not be any abnormality.

6.5 Random drop (Packing condition): Height 60cm, 3 times on the wood floorboard ,shall not be any abnormality.

6.6 Dry heat: 100 +/- 2°C 96 hours.

6.7 Cold: -20 +/- 2°C 96 hours.

6.8 Damp Heat: 60 +/- 2°C, 93 +/- 3% RH 96 hours.

6.9 Change of temperature: exposed 5 cycle; each consisting of 30 minutes at -20 +/- 2°C, 2-3 minutes at 20 +/- 2°C, 30 minutes at 85 +/- 2°C, 2-3 minutes at 20 +/- 2°C.

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