

10/100BASE-TX TRANSFORMER MODULES



Features:

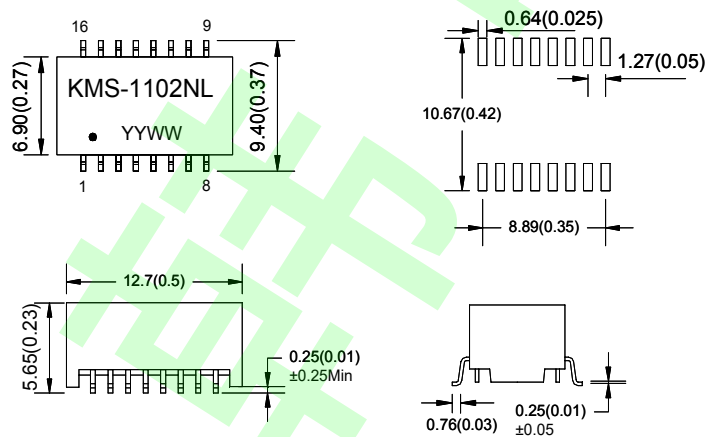
- IEEE 802.3af/ANSI X3.263 compliant performance.
- Operating Humidity:90%RH
- Storage temperature range: -40~+85°C,90%RH
- RoHS compliant

Specifications

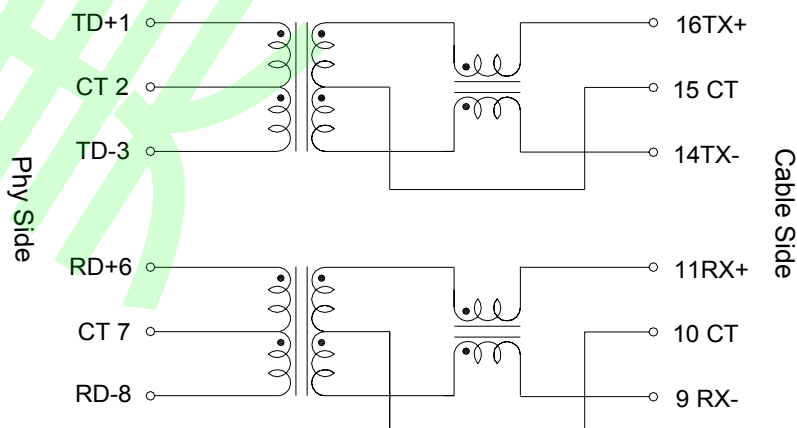
Electrical Specification@25°C Operating Temperature 0 to +70°C							
Part NO	Trun Ratio (±3%)		OCL primary@ 100KHz,0.1Vrms,8mA	Leakage primary@ 10KHz,0.1Vrms	Cww (Pri.:Sec.)	DCR (Ω)	
	TX	RX				Primary	Secondary
KMS-1102NL	1CT:1CT	1CT:1CT	350uH Min	0.5uH max	35pF Max	0.9 Max	1.2 Max

Electrical Specification@25°C Operating Temperature 0 to +70°C									
Part NO	Insertion loss (dB max) 1-100MHz	Return loss(dB min) MHz				CMRR (dB min .) MHz		Crosstalk (dB min .) MHz	Isolation Voltage (Vrms min)
		1-30	40	50	60-100	1-60	60-100	1-100	
KMS-1102NL	-1.0	-18	-16	-16	-10	-35	-30	-33	1500

Dimension Unless otherwise specified, all tolerances are ±0.25mm

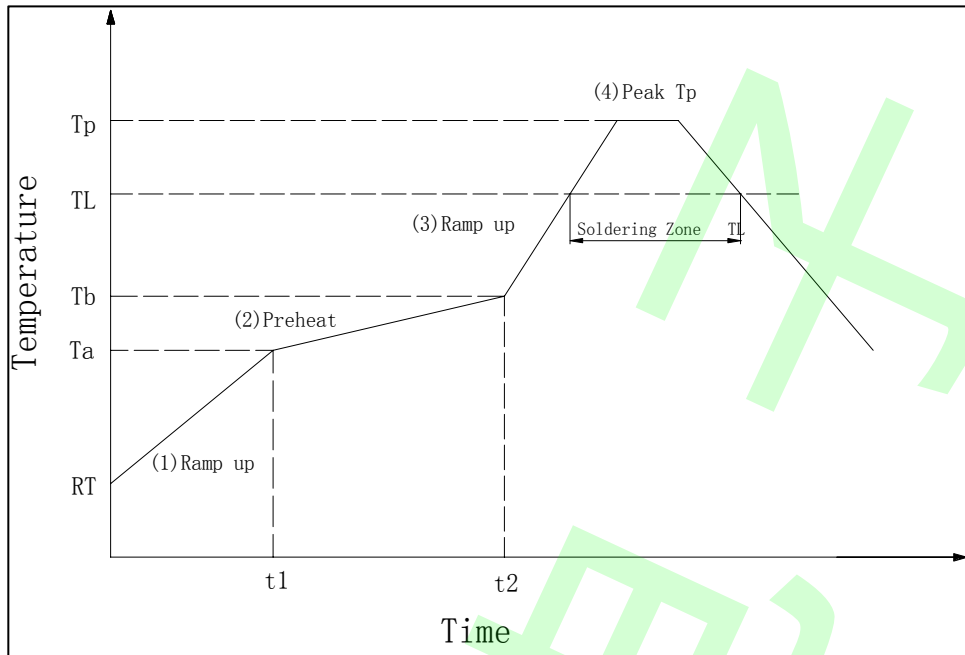


Schematic



5.SUGGEST PROFILE

IR reflow graph



IR reflow profile

Form-1 (Reference JEDEC J-STD-020C Table 5-2))

IR reflow profile		Sn-Pb	Pb-free
step#	Profile Feature	Condition/Duration	Condition/Duration
step1	Ramp-up rate	1.5-3°C/sec.	1.5-3°C/sec.
step2	Preheat : 100~150°C (Ta-Tb)	t1-t2 : 60~120 sec.	t1-t2 : 60~180 sec.
step3	Ramp-up rate (T _L to T _p)	1.5-3°C/sec.	1.5-3°C/sec.
	Temperature maintained above 183°C (T _L)	T _L : 60-150sec.	T _L : 80-150sec.
step4	Peak temperature (T _p)	230+5/-10°C	260+0/-5°C
	Time within 3σ of actual peak temperature	30±0 sec.	30±0 sec.
step5	Ramp-down rate	6°C/sec.Max	6°C/sec.Max
Note1	Subject the samples to 3 cycles of the above defined reflow conditions		Subject the samples to 3 cycles of the above defined reflow conditions
Note2	Time 25°C to peak temperature : 6 minutes max.		Time 25°C to peak temperature : 8 minutes max.
Note3			The time between reflows shall be 5 minutes minimum and 60minutes maximum

SnPb Eutectic Process- "Package Peak Reflow Temperature"

Form-2 (Reference JEDEC J-STD-020C Table 4-1)

产品厚度	产品体积 < 350mm ³	产品体积 ≥ 350mm ³
< 2.5mm	240 +0/-5°C	225 +0/-5°C
≥ 2.5mm	225 +0/-5°C	225 +0/-5°C

Pb-free Process - "Package Peak Reflow Temperature"

Form-3 (Reference JEDEC J-STD-020C Table 4-2)

产品厚度	产品体积 < 350mm ³	产品体积 350mm ³ - 2000mm ³	产品体积 > 2000mm ³
< 1.6mm	260 +0/-5°C	260 +0/-5°C	260 +0/-5°C
1.6mm-2.5mm	260 +0/-5°C	250 +0/-5°C	245 +0/-5°C
> 2.5mm	250 +0/-5°C	245 +0/-5°C	245 +0/-5°C



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REV: 00

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6. Reliability																								
No.	Test Item	Refer To Standard	Test Condition																					
1	Resistance To Soldering Heat---Convection Reflow	IPC/JEDEC J-STD-020D	1). Peak Temperature: Refer to Specification According to Package Body Thickness And Volume 2). Preheat Temperature and Soak Time: 150~200C, 60~120 Seconds 3). Average Ramp-up Rate: 3C/Second Max 4). Above 217°C: 60~150 Seconds 5). Peak Temperature-5°C: Over 30 S																					
2	Thermal Shock	IEC68-2-14 Method A	1. Low Temperature: -40°C 2. High Temperature: 125 3. Dwell Time: 30 Minutes 4. Transition Time: Less Than 5 Minutes 5. Number of Cycles: 10																					
3	High Temperature	IEC68-2-2 Method A	125 °C, 96Hours																					
4	Low Temperature	IEC68-2-1 Method A	-40°C, 96Hours																					
5	Temperature Humidity Cycle	IEC68-2-38	<table border="1"> <thead> <tr> <th>Temp</th> <th>Humidity</th> <th>soak time</th> </tr> </thead> <tbody> <tr> <td>25~65° C</td> <td>93+/-3%RH</td> <td>1.5 hr</td> </tr> <tr> <td>65° C</td> <td>93+/-3%RH</td> <td>4 hr</td> </tr> <tr> <td>65~25° C</td> <td>80~96%RH</td> <td>2.5 hr</td> </tr> <tr> <td>25~65° C</td> <td>93+/-3%RH</td> <td>1.5hr</td> </tr> <tr> <td>65° C</td> <td>93+/-3%RH</td> <td>4hr</td> </tr> <tr> <td>65~25° C</td> <td>80~96%RH</td> <td>2</td> </tr> </tbody> </table>	Temp	Humidity	soak time	25~65° C	93+/-3%RH	1.5 hr	65° C	93+/-3%RH	4 hr	65~25° C	80~96%RH	2.5 hr	25~65° C	93+/-3%RH	1.5hr	65° C	93+/-3%RH	4hr	65~25° C	80~96%RH	2
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6	Vibration	IEC68-2-6	1. Sine Wave 2. Amplitude: 0.75mm 3. Frequency: 5~500~5Hz 4. Direction: X, Y, Z 5. Number of Sweep Cycles Per Direction: 10 6. Duration: 2 Hours Each Direction																					
7	Mechanical Shock	MIL-STD-202	1). Half -Sine Wave 2). Peak Acceleration: 50G 3). Duration: 11ms 4). Direction: X, Y, Z, -X, -Y, -Z 5). Number of Shock Per Direction: 3																					
8	Free Drop	ISO4180	1) Height: Refer to Specification According to Production weight 2). 1Corner, 3Edges, 6Faces . Total Are 10 Times																					
9	Solderability	JESD22-B102D	1). Precondition: 150±5° C, 16±0.5Hours 2). Flux Type: ROL1 3). Immersion Flux Time: 5~10 Seconds 4). Solder Temperature: 245±5° C 5). Solder Immersion Time: 5±0.5 Seconds 6). Solder Immersion/Emersion Speed: 25.4±6.4mm/Second																					
10	Accelerated Moisture Resistance---Unbiased Autoclave	JESD22-A102-C	1. Temperature: 121° C 2. Humidity: 100% 3. Vapor Pressure: 29.7 Psia or 205KPa 4. Duration: 96 hours																					