

100/1000BASE-TX TRANSFORMER MODULES

Features:

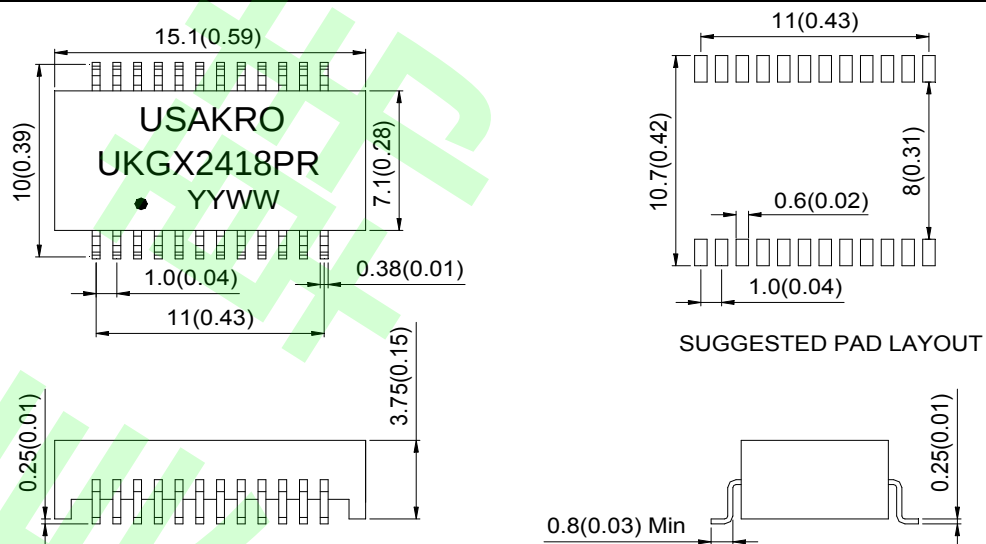
- Compliant with IEEE802.3 standard for 1000 BASE-T
- Suitable for End-span POE applications with 720mA current capability
- Suitable for End-span POE BT applications with 1000mA current capability
- RoHS compliant

Specifications

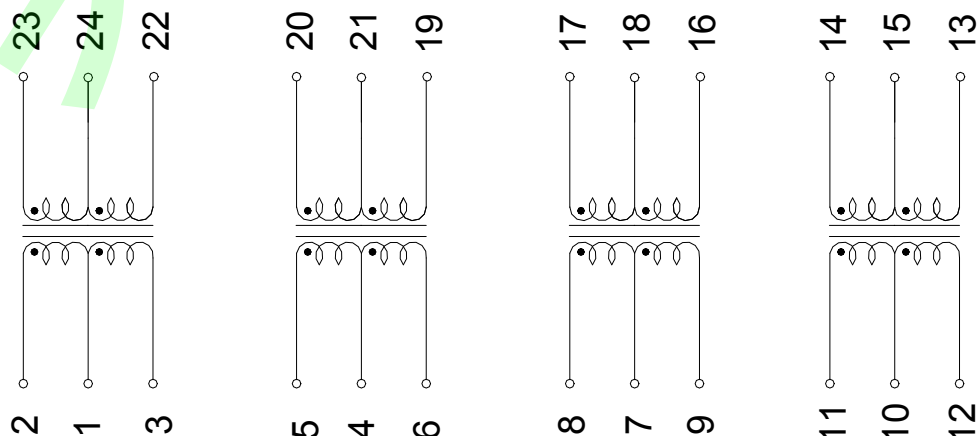
Electrical Specification@25°C Operating Temperature -40 to +85°C							
Part NO	Trun Ratio (±3%)		OCL primary@ 100KHz,0.1Vrms,8mA	Leakage primary@ 100KHz,0.1Vrms	Cww (Pri.:Sec.)	DCR (Ω)	
	TX	RX				Primary	Secondary
UKGX2418PR	1CT:1CT	1CT:1CT	350uH Min	0.5uH max	35pF Max	0.9 Max	1.2 Max

Electrical Specification@25°C Operating Temperature -40 to +85°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		
UKGX2418PR	-1.0	-18	-16	-16	-10	-35	-30	-33	1500

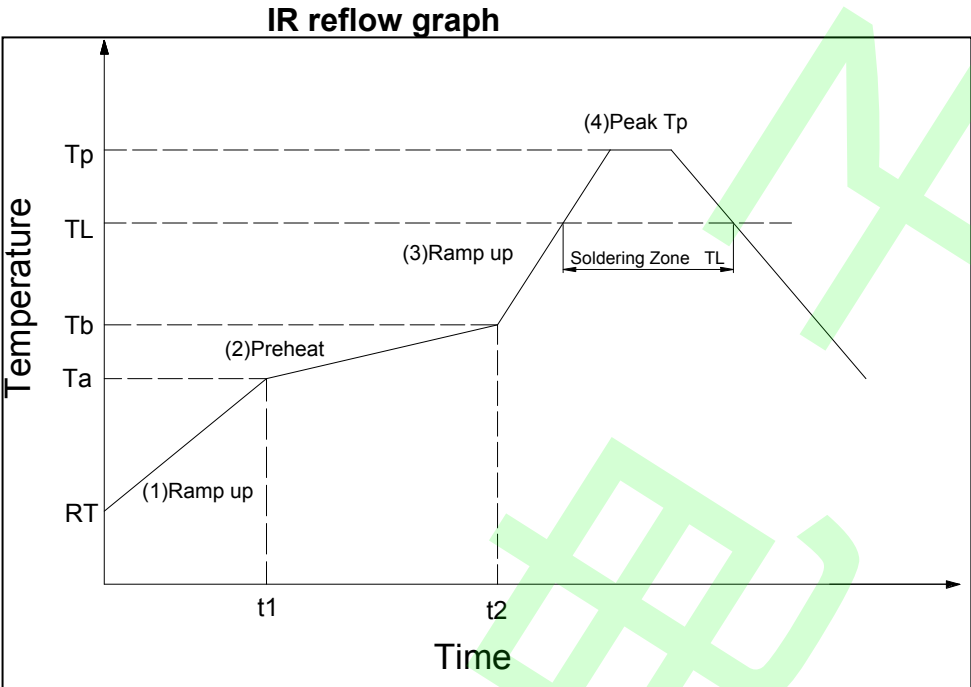
Dimension:mm(inch)+/-0.25(0.01)



Schematic



5.SUGGEST PROFILE



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(T_a - T_b)	t_1 - t_2 : 60~120 sec.	t_1 - t_2 : 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 5°C of actual peak temperature	30±10 sec.	30±10 sec.
step5	Ramp-down rate	6°C/sec.Max	6°C/sec.Max
Note1	Subject the samples to 3 cycles of the above definid reflow conditions		Subject the samples to 3 cycles of the above definid 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”

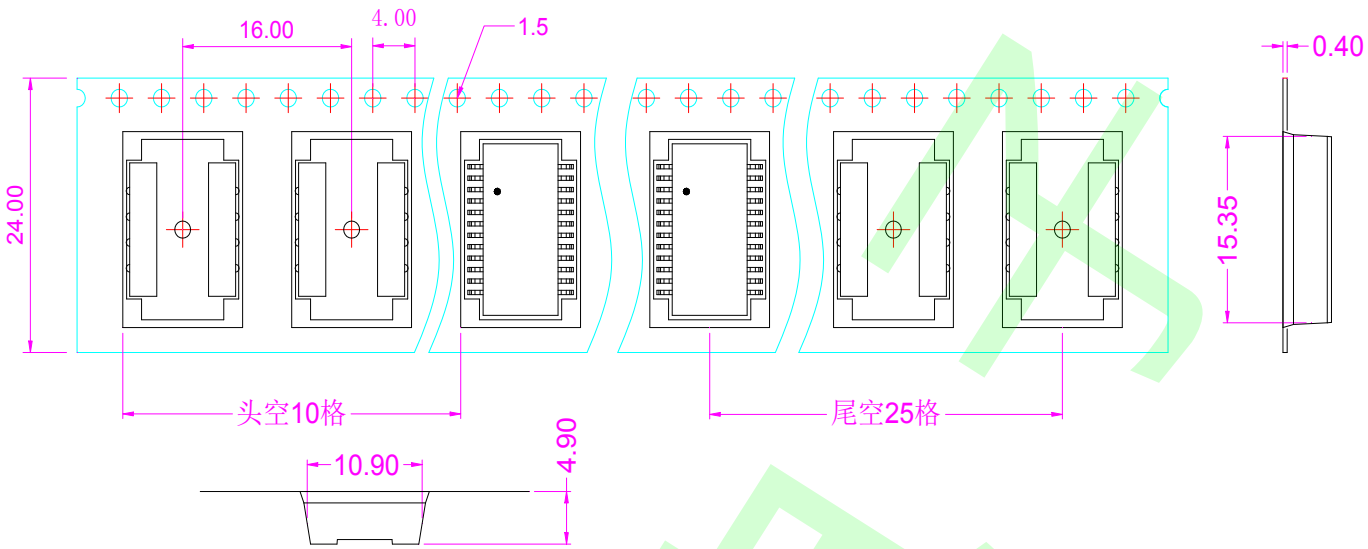
Form-3 (Referenrc JEDEC J-STD-020C Table 4-2)

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

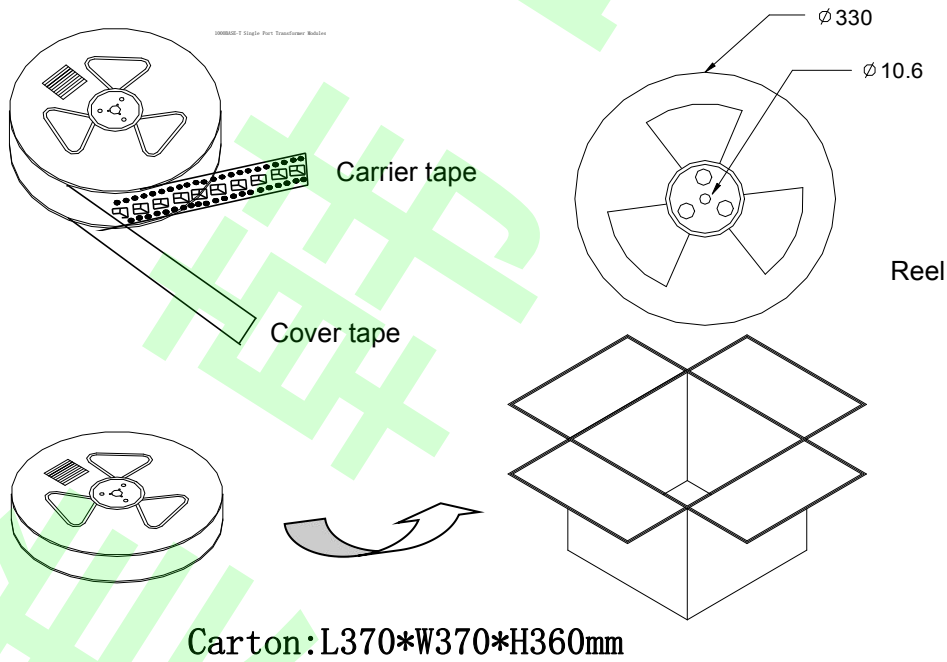
6. Reliability

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: 150~200℃,60~120 Seconds 3).Average Ramp-up Rate: 3℃/Second Max 4).Above 217℃: 60~150 Seconds 5).Peak Temperature-5℃: Over 30 S																					
2	Thermal Shock	IEC68-2-14 Method A	1.Low Temperature:-40℃ 2.High Temperature:125 3.Dwell Time:30 Minutes 4.Transition Time: Less Than 5Minutes 5.Number of Cycles: 10																					
3	High Temperature	IEC68-2-2 Method A	125℃,96Hours																					
4	Low Temperature	IEC68-2-1 Method A	-40℃,96Hours																					
5	Temperature Humidity Cycle	IEC68-2-38	<table><tr><td>Temp</td><td>Humidity</td><td>soak time</td></tr><tr><td>25~65℃</td><td>93+/-3%RH</td><td>1.5 hr</td></tr><tr><td>65℃</td><td>93+/-3%RH</td><td>4 hr</td></tr><tr><td>65~25℃</td><td>80~96%RH</td><td>2.5 hr</td></tr><tr><td>25~65℃</td><td>93+/-3%RH</td><td>1.5hr</td></tr><tr><td>65℃</td><td>93+/-3%RH</td><td>4hr</td></tr><tr><td>65~25℃</td><td>80~96%RH</td><td>2</td></tr></table>	Temp	Humidity	soak time	25~65℃	93+/-3%RH	1.5 hr	65℃	93+/-3%RH	4 hr	65~25℃	80~96%RH	2.5 hr	25~65℃	93+/-3%RH	1.5hr	65℃	93+/-3%RH	4hr	65~25℃	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℃,16±0.5Hours 2).Flux Type:ROL1 3).Immersion Flux Time: 5~10 Seconds 4).Solder Temperature:245±5℃ 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℃ 2. Humidity: 100% 3. Vapor Pressure: 29.7 Psia or 205KPa 4.Duration:96 hours																					

7 CARRIER TAPE



8 PACKAGE



Product	PCS/Reel	PCS/Box	Product No.	Weigh(g/pcs)
24mm卷轮系列	800	4800	UKGX2418PR	0.682



Dongguan Usakro Electronic Technology Co., Ltd.

REV: A1

东莞市美韩电子科技有限公司

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9. Record of Revision

[illegible]