

10/100/1000BASE-TX TRANSFORMER MODULES



Features:

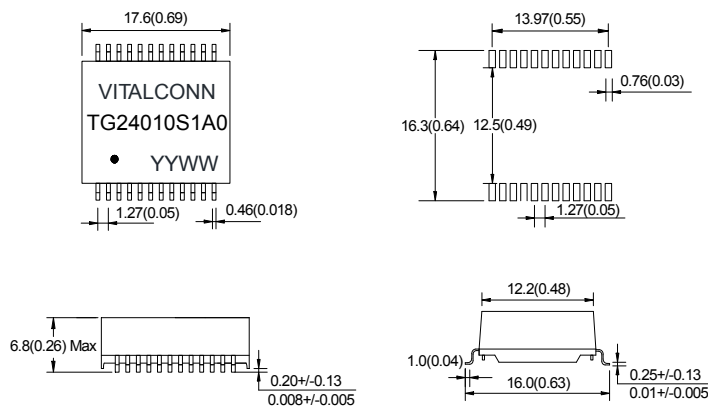
- IEEE 802.3at/ANSI X3.263 compliant performance.
- Suitable for End-span POE applications with 720mA current capability.
- Storage temperature range: -40~+85°C,90%RH
- RoHS compliant

Specifications

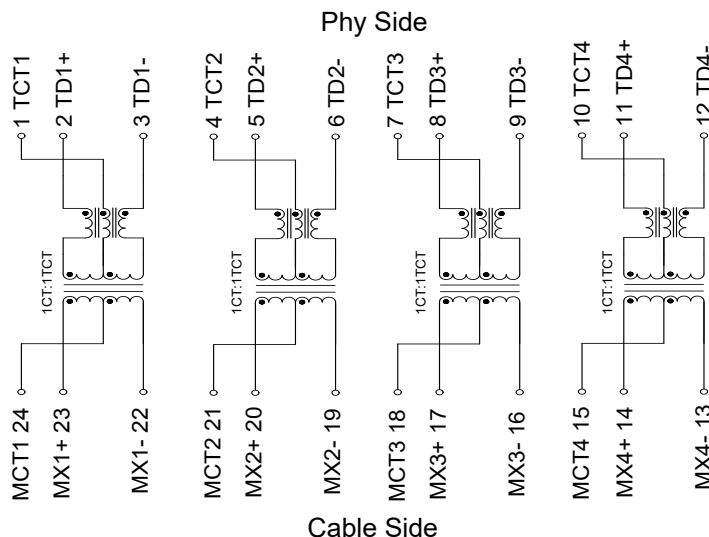
Electrical Specification@25°C Operating Temperature -40 to +85°C							
Part NO	Trun Ratio (±3%)		OCL primary@ 100KHz,0.1Vrms,18mA	Leakage primary@ 10KHz,0.1Vrms	Cww (Pri.:Sec.)	DCR (Ω)	
	TX	RX				Primary	Secondary
TG24010S1A0	1CT:1CT	1CT:1CT	350uH Min	0.5uH max	35pF Max	1.2Max	1.4 Max

Electrical Specification@25℃ Operating Temperature -40 to +85℃									
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	
TG24010S1A0	-1.15	-18	-16	-16	-10	-35	-30	-33	1500

Dimension

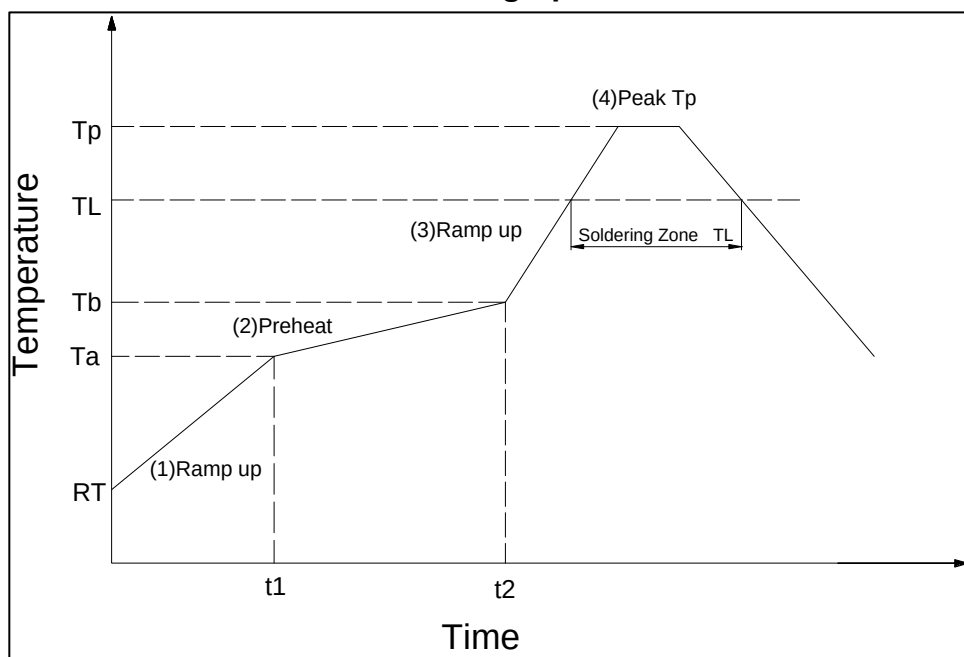


Schematic



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 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 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 (Referencre 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	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
6	Vibration	IEC68-2-6	1.Sine Wave 2.Amplitude:0.75mm 3.Frequence: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
		VITALCONN ELECTRONICS TECHNOLOGY (SHENZHEN) CO., LIMITED	REV: A0 Page: 3 of 4

SMD PARTS PIN 脚吃锡性检验规范

1.适用范围：含所有 SMD PARTS 吃锡性之检验

2.检验方法：

A.照 AQL 方式取样

B.采用自然目视检测：沾锡后利用反光看其吃锡面是否良好及有 否发黑，氧化等之不良现象。

C.若有进一步分析检测必要时于每一 LOT 取 5 PCS SAMPLE 再做下列 TEST:

a.利用 50 倍显微镜，测看其吃锡面是否良好规格需达 90%以上。b.检验其针孔需小于 3 个以下。

D.焊锡性实验：以实际的印刷电路，印上锡膏，再放置 SMD 零件。过回焊炉，以查拟实际状况，完成 SMT 作业后，再检测是否有吃锡不良的情形。

PIN SOLDERBILITY TEST

1. Soldering Material:

A. Tin: PIN=Sn/Ag/ Cu

B. Flux: R Type Flux

2. Random sampling 5 pcs for each lot to do tolerability test, and make sure

A. Soldering surface should be covered over 90%

B. Un-covered small pin hold should be less than 3 pcs.

环保情况说明

●产品符合 RoHS 2002-95-EC 指令

●不含有 RoHS 禁止的 Pb-Cd-Hg-Cr6+-PBB-PBDE 六种有害

●我司检验 RoHS 物质是根据 IEC-62321 方法进行混测的

●产品有害物质标准如下：

Pb 铅 $\leq$ 1000 PPM

Hg 汞 $\leq$ 1000 PPM

Cd 镉 $\leq$ 100 PPM

Cr+6 六价铬 $\leq$ 1000 PPM

PBB 多溴联苯 $\leq$ 1000 PPM

PBDE 多溴二苯醚 $\leq$ 1000 PPM

●Compliant with RoHS Directive.

●Free from Pb- Cd-Hg-Cr6+-PBB-PBDE that banned in the RoHS Directive

●We will inspect the Restricted hazardous substance with component mixture according to the criteria of IEC-62321

●The directives for prohibited substances is as follows :

Pb $\leq$ 1000 PPM

Hg $\leq$ 1000 PPM

Cd $\leq$ 100 PPM

Cr+6 $\leq$ 1000 PPM

PBB $\leq$ 1000 PPM

PBDE $\leq$ 1000 PPM

产品储存条件说明底（座类产品）

1. 未拆真空包装储存条件： 温度： $\leq$ 30℃湿度： $\leq$ 60%RH

2. 保存期限： 1 年。

3. 产品在超过保存期限还未使用，建议在使用前先检查PIN脚是否氧化，如有氧化现象建议重新镀锡再使用。