

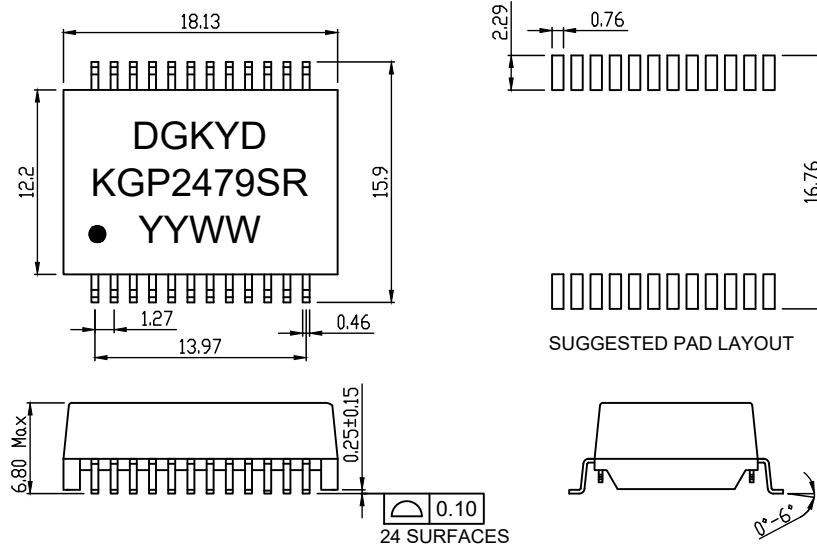
HIGH POE+ (1A) ENABLED TRANSFORMER 10/100/1000 BASE-T SINGLE PORT SURFACE MOUNT MAGNETICS

DGKYD

- Meets IEEE 802.3 & ANSI X3.263 Standards.
- RoHS Compliant.
- 100/1000 Base-T, Surface Mount Type, Open Header.
- Suitable For End-span and Mid-span PoE+ Applications.
- 1A Current Capability.
- Designed to meet reflow soldering 245°C peak requirement.
- Operating temperature range: -40°C to +85°C.
- Storage temperature range: -20°C TO +125°C.

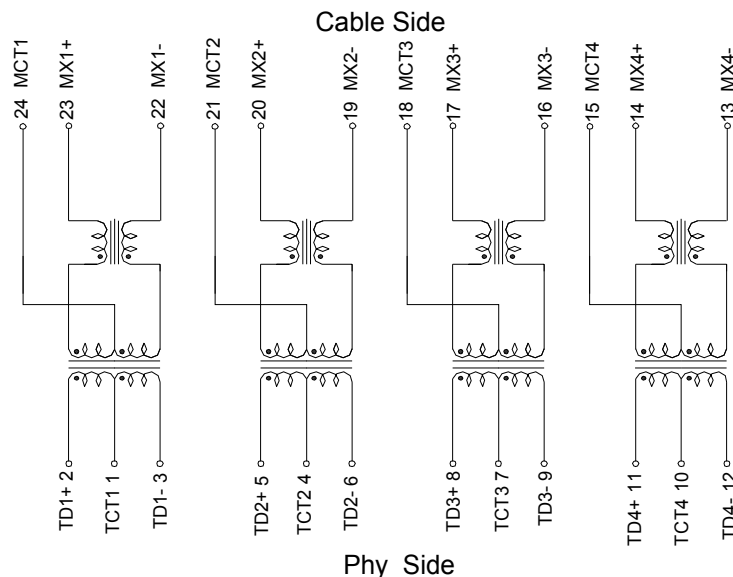
Electrical Specifications @25°C								
Part Number	OCL(uH Min) @100KHz,0.2V With 8mA DC Bias	Turns Ratio (±5%)	Leakage Inductance (uH Max) @ 100KHz 0.2V			CAP (pF Max) @ 100KHz 0.2V	DCR (Ω Max)	HI-POT (VAC/1mA/3S Min)
KGP2479SR	350uH	1CT:1CT	0.50			28	1.2	1500
	Continue							
	Insertion Loss (dB Max)	Return Loss (dB Min)			Cross talk (dB Min)		CMRR (dB Min)	
	0.5-100MHz	0.5-30MHz	30.1-60MHz	60.1-80MHz	80.1-100MHz	0.5-40MHz	40.1-100MHz	0.5-100MHz
-1.1	-18	-15	-12	-10	-35	-27	-30	

MECHANICAL



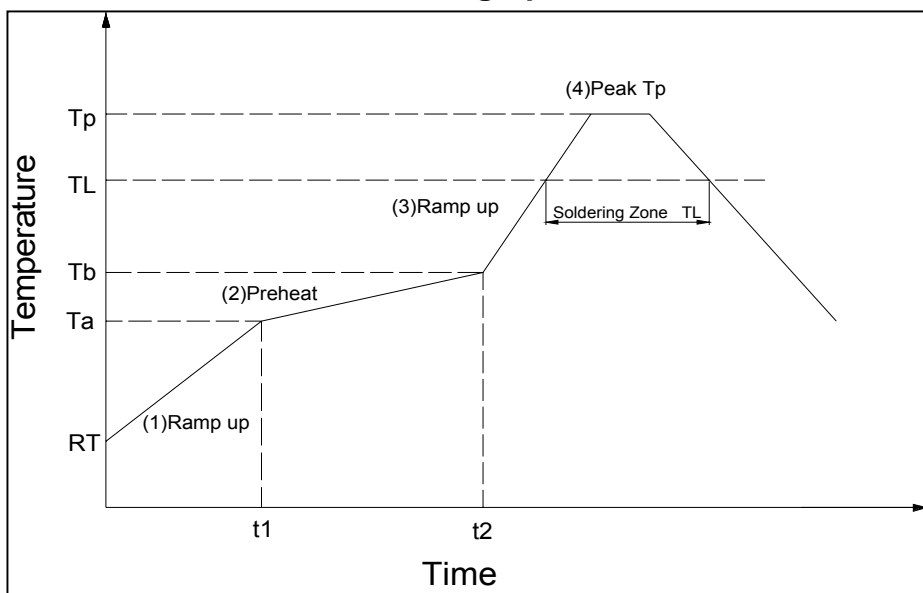
Unless otherwise specified all tolerances are:±0.25 in mm

SCHEMATICS



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 (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

DGKYD

Dongguan Keyouda Electronic Co.,Ltd

REV: 00

东莞科优达电子科技有限公司

Page: 2 of 3

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
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		Page: 3 of 3	