

Initial Data & Reliability Test Comparison Data of LQW15AN 80 series

添付資料

弊社品番/ LQW15AN75NG80D (*No.9は除く/ Except No. 9)
Murata Part No./ LQW15AN75NG80D

Appendix

試験項目、条件 Testing Item, Condition	サンプル数 Sample Size	評価項目 Confirmed Item	Japan		Malaysia		判定値 Acceptance Value	判定 OK/NG
			現行 Current Factory	変更後 New Factory	現行 Current Factory	変更後 New Factory		
1. 初期値/Initial	30	L寸法/Dimension L(mm)	AVG	1.019	1.052	1.0±0.1 mm	OK	
			MAX	1.03	1.06			
			MIN	1.01	1.05			
			σ	0.005	0.005			
		W寸法/Dimension W(mm)	AVG	0.598	0.551	0.6±0.1 mm	OK	
			MAX	0.61	0.56			
			MIN	0.59	0.54			
			σ	0.005	0.009			
		T寸法/Dimension T(mm)	AVG	0.556	0.550	0.5±0.1 mm	OK	
			MAX	0.56	0.56			
			MIN	0.55	0.54			
			σ	0.003	0.005			
		インダクタンス/Inductance(nH) (at 100MHz)	AVG	74.6	74.9	75nH±2%	OK	
			MAX	75	76			
			MIN	74	74			
			σ	0.4	0.4			
		Q (at 200MHz)	AVG	29.39	29.62	25 MIN	OK	
			MAX	29.7	30.2			
			MIN	29.0	29.2			
			σ	0.17	0.24			
		Rdc	AVG	1.02	1.03	1.224Ω MAX	OK	
			MAX	1.0	1.1			
			MIN	1.0	1.0			
			σ	0.01	0.02			
自己共振周波数 Self Resonant Frequency (GHz)	AVG	3.17	3.18	2.4GHz MIN	OK			
	MAX	3.2	3.2					
	MIN	3.1	3.1					
	σ	0.02	0.03					
2. 電極固着力/Bonding Strength 荷重/Applying Force(F) : 5.0N 加圧時間/Applying Time : 5±1seconds 加圧方向/Applied direction : Parallel to the substrate	10	外観/Appearance	-	No damaged	No damaged	No damaged	OK	
3. たわみ強度/Bending Strength 基板材質/Substrate : Glass-epoxy substrate (t=0.8mm). たわみ量/Deflection(n) : 2mm 保持時間/Keeping Time : 5 seconds 加圧治具/Pressure jig : R230	10	外観/Appearance	-	No damaged	No damaged	No damaged	OK	
4. 耐振性/Vibration 振動周波数/Oscillation Frequency : 10Hz to 55Hz to 10Hz for 1 min. 加速度幅/Total Amplitude : 1.5mm 試験時間/Testing Time : A period of 2h in each of 3 mutually perpendicular directions (Total 6h)	10	外観/Appearance	-	No damaged	No damaged	No damaged	OK	
5. はんだ付け性/Solderability フラックス/Flux : Ethanol solution of rosin,25(wt)% includes activator equivalent to 0.06(wt)% chlorine. 予熱/Pre-Heating : 150°C±10°C/60s to 90s はんだ/Solder : Sn-3.0Ag-0.5Cu はんだ温度/Solder Temperature : 270±5°C 浸せき時間/Immersion Time : 10±1s	10	外観/Appearance	-	The electrodes shall be at least 95% covered with new solder coating.	The electrodes shall be at least 95% covered with new solder coating.	The electrodes shall be at least 95% covered with new solder coating.	OK	
6. はんだ耐熱/Resistance to Soldering Heat はんだ/Solder : LFはんだ(Sn-3Ag-0.5Cu) 予熱/Pre-heating : 150°C±10°C/60s to 90s 加熱/Solder temperature : 270°C±5°C 浸漬時間/Immersion time : 10s±1s 後処理/Post-treatment: left at a room condition for 24 h±2 h	10	外観/Appearance	-	No damaged	No damaged	No damaged	OK	
		インダクタンス変化率/ Inductance Change (at 100 MHz)	AVG	0.07%	0.07%	Within ±5%	OK	
			MAX	1.0%	1.1%			
			MIN	-0.8%	-0.8%			
Q変化率/ Q Change	AVG	0.03%	-0.43%	Within ±20%	OK			
	MAX	0.7%	0.9%					
	MIN	-0.7%	-3.6%					
7. 耐寒性/Low Temp Resistance 温度/Temperature : -55±2°C 時間/Time : 1000h(+48h,-0h)	20	外観/Appearance	-	No damaged	No damaged	No damaged	OK	
		インダクタンス変化率/ Inductance Change (at 100 MHz)	AVG	0.19%	0.33%	Within ±5%	OK	
			MAX	0.4%	1.5%			
			MIN	-0.9%	0.2%			
Q変化率/ Q Change	AVG	-2.05%	-1.53%	Within ±20%	OK			
	MAX	-1.0%	1.5%					
	MIN	-2.7%	-2.9%					
8. 耐湿性/Humidity resistence 温度/Temperature : 85±2°C 湿度/Humidity : 85%(RH) 時間/Time : 1000h(+48h,-0h)	20	外観/Appearance	-	No damaged	No damaged	No damaged	OK	
		インダクタンス変化率/ Inductance Change (at 100 MHz)	AVG	0.16%	0.43%	Within ±5%	OK	
			MAX	0.9%	0.8%			
			MIN	-0.5%	0.0%			
Q変化率/ Q Change	AVG	-2.18%	-1.98%	Within ±20%	OK			
	MAX	3.4%	9.2%					
	MIN	-8.7%	-13.5%					
9. 耐熱性/Heat Resistance 温度/Temperature : 125±2°C 時間/Time : 1000h(+48h,-0h) *【LQW15AN1N7C80D】 電流密度最大の定数で最も信頼性が厳しいため上記品番を選定 This is obtained with LQW15AN1N7C80D. Due to the high density of the current, it is the most reliable of the series.	30	外観/Appearance	-	No damaged	No damaged	No damaged	OK	
		インダクタンス変化率/ Inductance Change (at 100 MHz)	AVG	1.45%	-0.62%	Within ±5%	OK	
			MAX	4.1%	3.3%			
			MIN	-3.2%	-3.4%			
Q変化率/ Q Change	AVG	-3.84%	0.96%	Within ±20%	OK			
	MAX	11.3%	9.1%					
	MIN	-16.0%	-6.5%					
10. 熱衝撃/Thermal shock 1サイクル条件/1 Cycle condition 1 step : -55°C±2°C, 30±3 minutes 2 step : ordinary Temp. , (10~15 minutes) 3 step : 125°C±2°C, 30 minutes±3 minutes) 4 step : ordinary Temp. , (10~15 minutes) 回数/Total of Cycles : 1000 cycles	30	外観/Appearance	-	No damaged	No damaged	No damaged	OK	
		インダクタンス変化率/ Inductance Change (at 100 MHz)	AVG	0.62%	0.75%	Within ±5%	OK	
			MAX	2.0%	2.8%			
			MIN	0.0%	-0.7%			
Q変化率/ Q Change	AVG	-1.15%	-7.51%	Within ±20%	OK			
	MAX	2.1%	-3.1%					
	MIN	-5.2%	-9.4%					