

Travelling Merchant: _____

DATASHEET

Standard: DPAM27000001

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2019.03.15			

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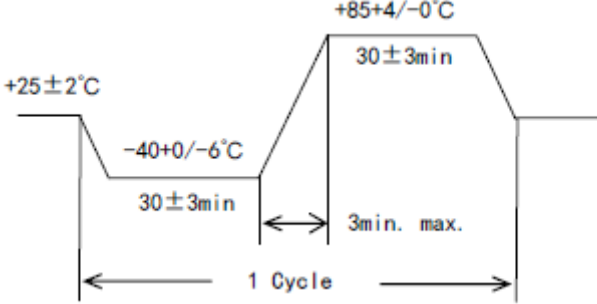


1、 Electrical Parameters

MODEL: DPAM27000001							
No.	Parameters	SYM.	Electrical Spec.				Notes
			Min.	Typ.	Max.	Units	
1	Nominal Frequency	F0	27.00			MHz	
2	Oscillation Mode	-	Fundamental			-	
3	Load Capacitance	CL	20			pF	
4	Frequency Tolerance	-	-10		+10	ppm	at 25°C ±3°C
5	Frequency Stability	-	-10		+10	ppm	Over Operating Temp. Range (Reference 25°C)
6	Operating Temperature	-	-20	~	+75	°C	
7	Aging	-	-3		+3	ppm	Per Year
8	Drive Level	DL			100	uW	
9	Equivalent Series Resistance	ESR		-	30	Ω	
10	Shunt Capacitance C0	C0	-	-	3	pF	
11	Insulation Resistance	-	500	-	-	MΩ	At Dc 100V
12	Storage Temperature Range	-	-40	~	+85	°C	



2、Reliability Specification

NO	ITEM	Conditions	Criteria
1	FREE FALL	FREE DROPPING FROM 75 cm HEIGHT 3 TIMES ON A HARD	A.C
2	VIBRATION	FREQUENCY: 10~55Hz AMPLITUDE (TOTAL EXCURSION): 1.5mm±15%, SWEEP TIME: 1MIN, 3 DIRECTION(X, Y, Z) EACH FOR	A.C
3	TEMPERATURE CYCLE	THE CRYSTAL UNIT SHALL BE SUBJECTED TO 100 SUCCESSIVE CHANGE OF TEMPERATURE CYCLES 	A.C.H
4	GROSS LEAK	STANDARD SAMPLE FOR AUTOMATIC GROSS LEAK DETERTOR	E
5	FINK LEAK	HELIUM BOMBING 5.0~5.5 Kgf / cm ² ,FOR 2 HOURS.	F
6	SOLDERABILITY	THE LEAD IS IMMERSSED IN A 260±5°C SOLDER BATH WITHIN 2±0.6 SECONDS	G
7	HIGH TEMP. & HUMIDITY	STORED AT 60±2°C AND HUMIDITY 90~95% FOR 500±12 H.	A.C.D.H
8	HIGH TEMPERATURE STORAGE	STORED AT 85±2°C FOR 720±12H. If Customer's temperature request is higher than the standard, Temperature test must be done for customer requirements	A.C.H
9	LOW TEMPERATURE	STORED AT -40±2°C FOR 500±12H. If Customer's temperature request is lower than the standard, Temperature test must be done for customer requirements	A.C.H
10	TERMINAL STRENGTH	SHALL BE PRESSURIZED AT A SPEED OF APPROX.0.5mm/sec IN THE DIRECTION INDICATED BY THE ARROW UNTIL THE BENDING WIDTH REACHES 3mm AND HELD FOR 5 SECONDS	A.C.
11	STICKING TENDENCY	A R0.5 JIG SHALL BE USED TO APPLY A 10N DEAD LOAD IN THE DIRECTION INDICATED BY THE ARROW TO THE ELEMENT AND RETAIN IT FOR 10 SECONDS.	A.C.
12	ELEMENT ASSEMBLY STRENGTH	A R0.5 PRESSURIZED BAR SHALL BE USED TO APPLY A 10N LOAD IN THE CENTER OF ELEMENT AND RETAIN IT FOR 10 SECONDS.	A.C.



SPECIFICATIONS		
A	FREQUENCY CHANGE PERMITTED.	$\Delta F \leq 5\text{PPM}$
B	FREQUENCY CHANGE PERMITTED.	$\Delta F \leq 10\text{PPM}$
C	EQUIVALENT SERIES RESISTANCE CHANGE PERMITTED.	$\Delta CI \leq 5\Omega$ or 15%
D	INSULATION RESISTANCE	$> 500\text{M}\Omega$
E	PRESSURE GAP LESS THAN	$< 1 * 1\text{E-}4 \text{ Pa} \cdot \text{ m}^3 / \text{sec}$
F	LEAK RATE LESS THAN	$< 1 * 1\text{E-}9 \text{ Pa} \cdot \text{ m}^3 / \text{sec}$
G	A NEW UNIFORM COATING OF SOLDER SHALL COVER A MINIMUM 95% OF THE SURFACE	
H	THEN $25 \pm 2^\circ\text{C}$ OVER 2Hr BEFORE TESTING	

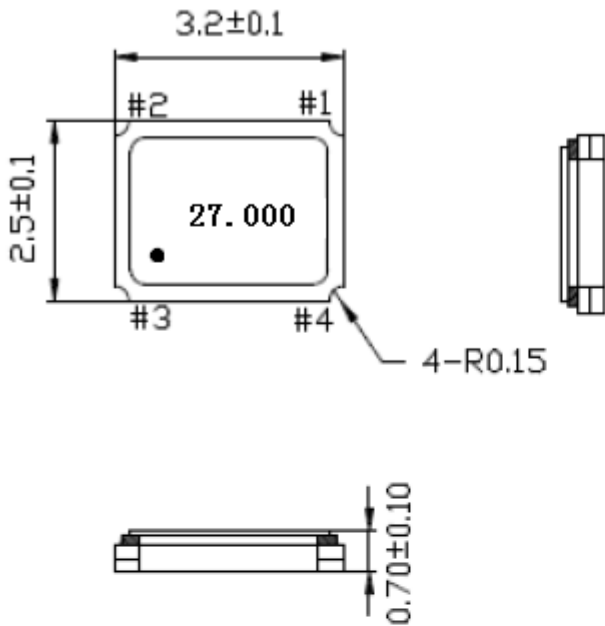
Remark:

※Each test done independently

※ Measurement condition: Electrical characteristics measured by S&A250B or equivalent.

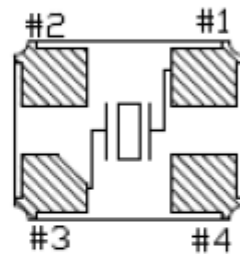


3、Mechanical Structure(mm)

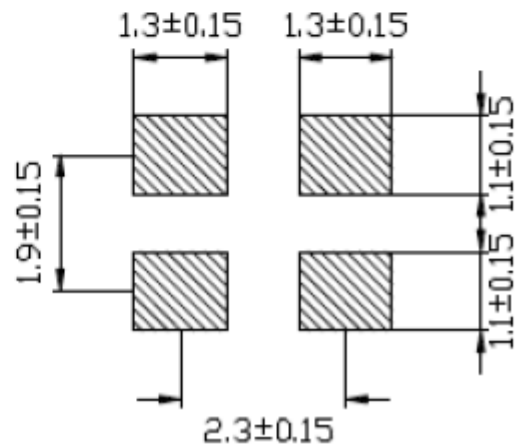
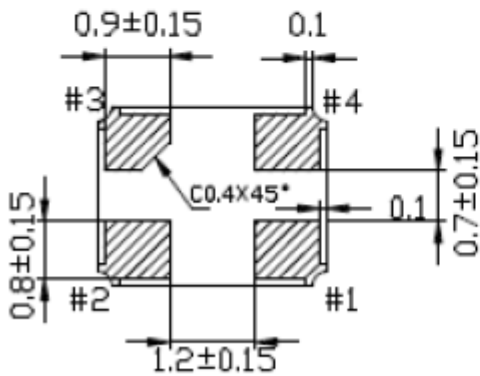


PIN CONNECT	
1,3	Crystal
2,4	GND

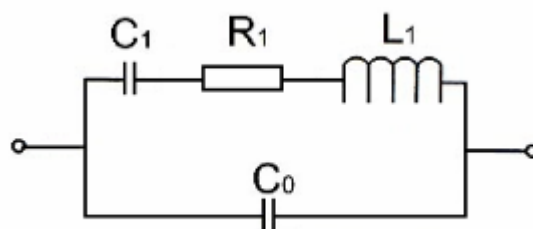
<TOP VIEW>



LAND PATTERN<REFERENCE>



4、Equivalent Circuit

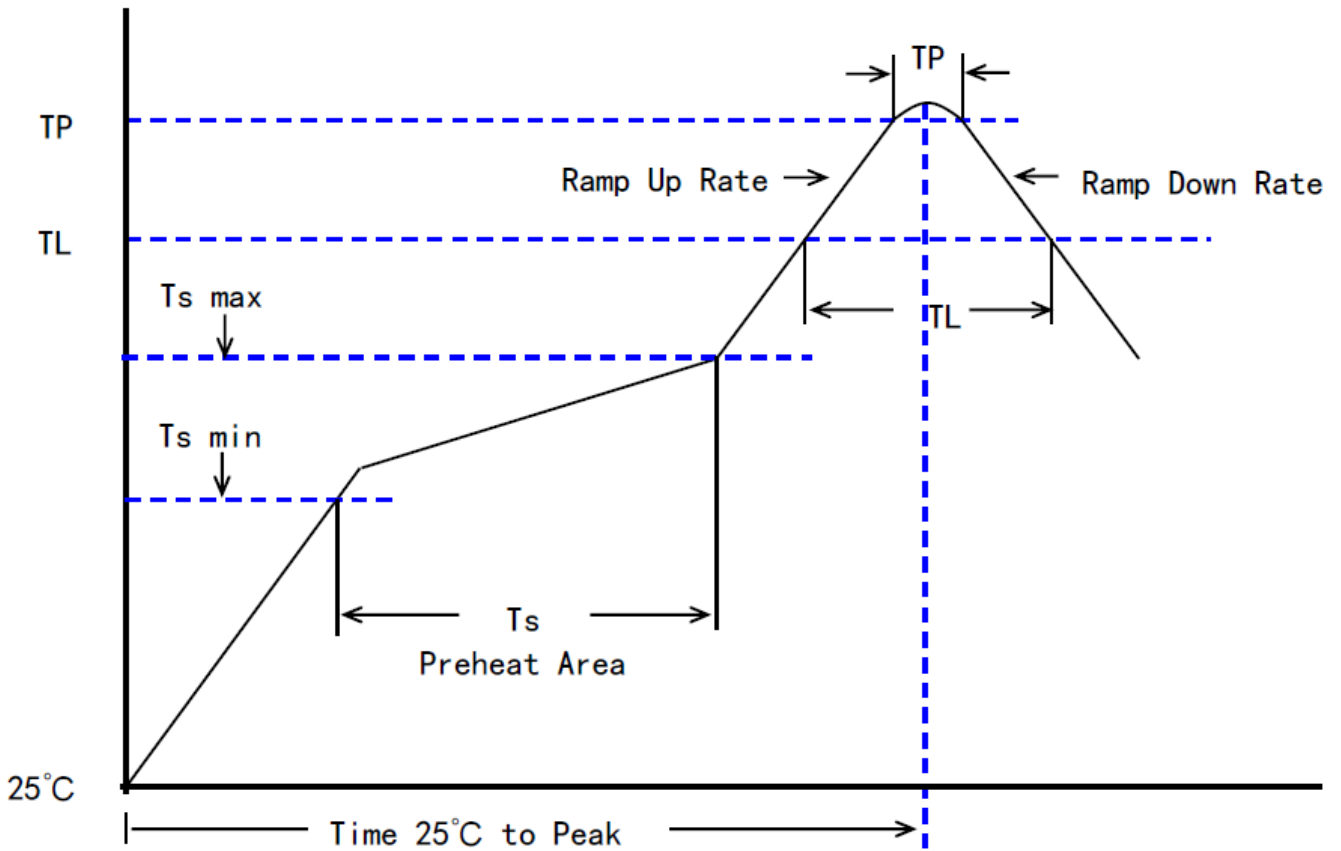


Equivalent Circuit



5、Reflow Profiles

参考标准 REFER: JEDEC J-STD-020D	
Profiles Feature	Pb-Free Assembly
Preheat/Soak	
Temperature Min (Ts min)	150°C
Temperature Max (Ts max)	200°C
Time (Ts) from (Ts min to Ts max)	60-120 seconds
Ramp-up rate (TL to TP)	3°C/second max.
Liquidous temperature (TL)	217°C
Time (TL) maintained above TL	60-150 seconds
Peak/Classification Temperature (TP)	260±5°C
Time within 5°C of actual Peak Temperature (TP)	20~40 seconds
Ramp-down rate (TP to TL)	6°C/second max.
Time 25 ° C to peak temperature	8 minutes max.
Suggest reflow times	3 Times max





6、 Package: Tape & Reel (mm)

