

Customer Code : \_\_\_\_\_

# DATASHEET

DAPU P/N :     **M75B-G413-10.00MHz**    

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2017.06.22			

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## 1. Electrical Parameters

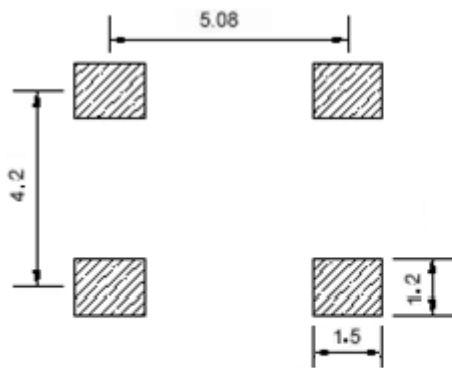
MODEL: M75B-G413-10.00MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Clipped Sine Wave				
	V <sub>p-p</sub>	0.8			V	
	Load	10KΩ//10pF				
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-0.05		+0.05	× 10 <sup>-6</sup>	T <sub>A</sub> varied from -40 to 85°C, measurement referenced to frequency observed with f <sub>ref</sub> =(f <sub>max</sub> +f <sub>min</sub> )/2, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V O <sub>load</sub> =10KΩ//10pF, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-1		+1	× 10 <sup>-6</sup>	Measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V, within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.05		+0.05	× 10 <sup>-6</sup>	measurement referenced to frequency observed T <sub>A</sub> =25°C, V <sub>cc</sub> varied from 3.13V to 3.47V, V <sub>c</sub> =1.65V and O <sub>Load</sub> =10KΩ//10pF.
	Frequency Tolerance vs. Load	-0.05		+0.05	× 10 <sup>-6</sup>	5% load change measurement referenced to frequency observed with T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V, O <sub>Load</sub> =10KΩ//10pF.
	Aging Tolerance Per Day	-0.02		+0.02	× 10 <sup>-6</sup>	T <sub>A</sub> =25°C, V <sub>cc</sub> =3.3V, V <sub>c</sub> =1.65V, and after 1h of operation.
	Aging Tolerance 1 Year	-1		+1	× 10 <sup>-6</sup>	
Power Supply	Current Consumption			10	mA	@25°C, V <sub>cc</sub> =3.3V, O <sub>load</sub> =10KΩ//10pF.
	Supply Voltage	3.13	3.3	3.47	V	
Voltage Control	Frequency tuning range	-15		-10	× 10 <sup>-6</sup>	V <sub>c</sub> =0V. measurement referenced to V <sub>c</sub> =1.65V.
		-1.0		+1.0	× 10 <sup>-6</sup>	V <sub>c</sub> =1.65V. measurement referenced to Exactly 10.00MHz.
		+10		+15	× 10 <sup>-6</sup>	V <sub>c</sub> =3.3V. measurement referenced to V <sub>c</sub> =1.65V.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100			KΩ	



Phase Noise	Phase Noise		-85	-80	dBc/Hz	10Hz
			-115	-110		100Hz
			-135	-130		1KHz
			-145	-140		10KHz
			-150	-145		100KHz
Environmental Conditions	Operable Temperature	-40		+85	°C	
	Storage Temperature	-55		+105	°C	
	ESD Level	Human Body Model, class2: 2000V to 4000V; ANSI/ESDA/JEDEC JS-001-2010.				
		Machine Model, class B: 200V to 400V; ANSI/ESDA/JEDEC JS-001-2010.				
	Moisture Sensitivity Level	Level 2.				
	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz~2000Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X , Y , Z) .IEC 68-2-06 Test Fc.				
Shock	100g; 6ms; half sine wave (3 times for each 3 directions X , Y, Z ),IEC 68-2-27 Test Ea/Severity 50A.					
Full Package Storage	Relative humidity (%)	20% ~70%				
	Temperature (°C)	-10~35°C				



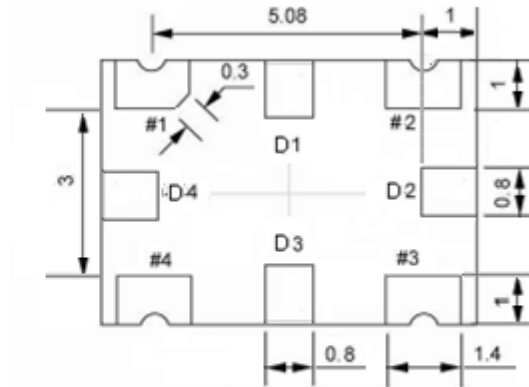
## 2. Mechanical Structure(mm)



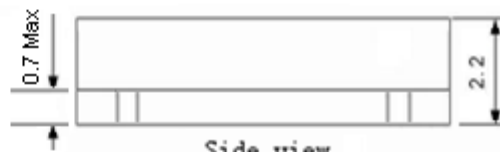
Solder pad layout



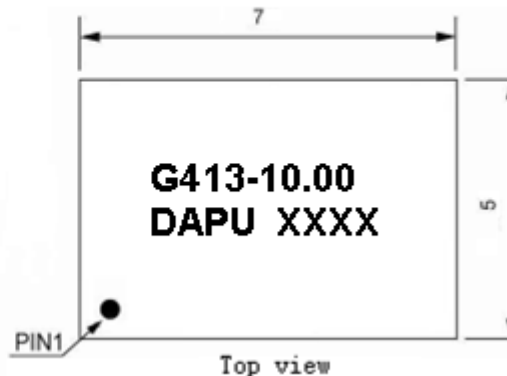
Right view



Bottom view



Side view



Top view

### PIN FUNCTION

PIN	NOTATION	FUNCTION
D1, D2, D3, D4	NC	Not Connect
1	VC	Control Voltage
2	GND	GND
3	OUTPUT	RF Output
4	VCC	Supply Voltage

**Note1:** Tolerance  $\pm 0.20\text{mm}$  without mark

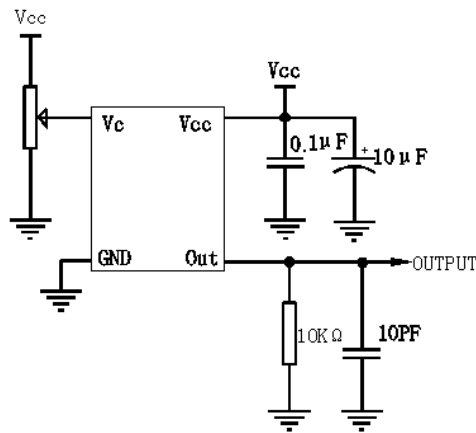
**Note2:** The first two xx representative: week  
After two xx representative: year

**Note3:** Referential weight 0.2g

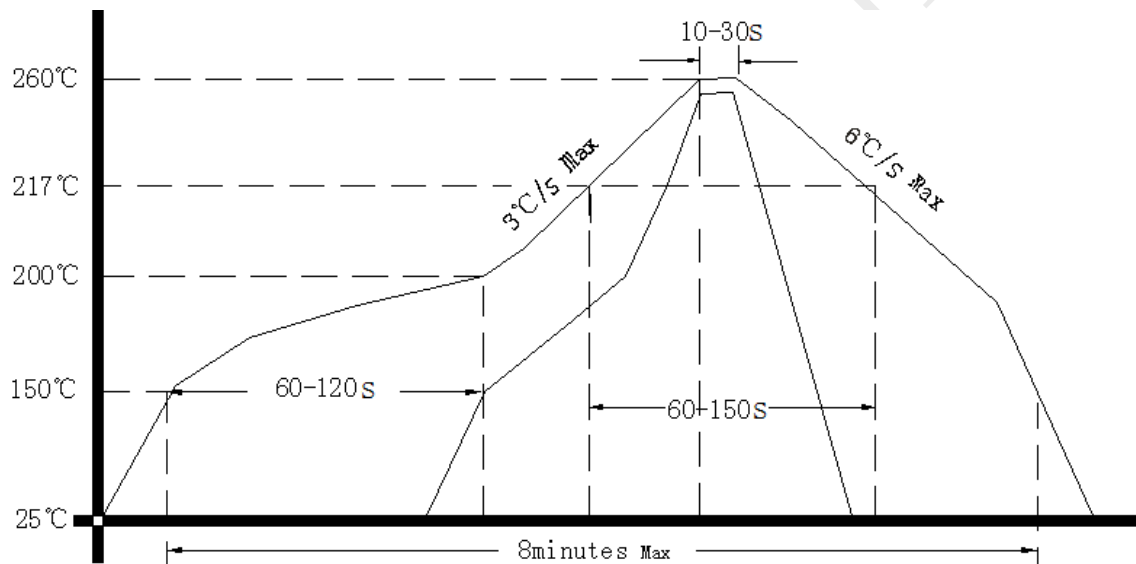
**Note4:** NC is not connect



### 3. Test circuit



### 4. Reflow Soldering Curve (RoHS)



### 5. Package: Tape & Reel (mm)

