

Customer Code : _____

DATASHEET

DAPU P/N: 023B-Q445-10.00MHz-C

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2017.04.27			

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1. Electrical Parameters

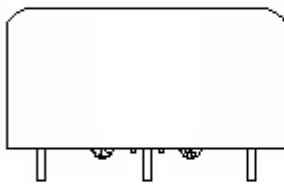
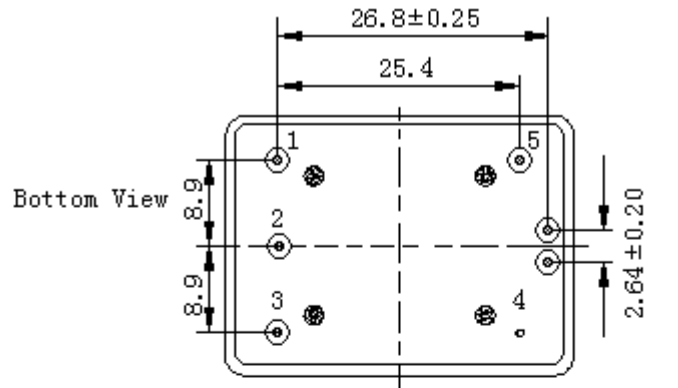
MODEL: O23B-Q445-10.00MHz-C						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	10.00			MHz	
	Output Waveform	Sine wave				
	Level	8	10	12	dBm	
	Load	50			Ω	
	Harmonics Suppression			-30	dBc	
	Spurious Suppression			-80	dBc	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-5.0		+5.0	$\times 10^{-9}$	T_A varied from -40°C to 85°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=12.0\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-0.1		+0.1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=12.0\text{V}$, $V_c=2.5\text{V}$ and after 15 minutes of operation, within 30 days after ex-works.
	Frequency Tolerance vs. supply voltage	-1.0		+1.0	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}$, V_{cc} varied from 11.4V to 12.6V, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$.
	Frequency Tolerance vs. Load	-1.0		+1.0	$\times 10^{-9}$	5% Load Change Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=12.0\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$.
	Short Term Stability		0.005		$\times 10^{-9}$	Temperature stability, no EMI/EMC or other interference, test after power for 1hour ref. to 25°C ; 1s, using PN9000 equipment.
	G Sensitivity			1.0	$\times 10^{-9}/\text{g}$	
	Aging Tolerance per day	-0.5		+0.5	$\times 10^{-9}$	V_{cc}, V_c, T_A constant Measurement referenced to frequency observed with $T_A=25^\circ\text{C}$, $V_{\text{cc}}=12.0\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$ and after 30 days of operation.
	Aging Tolerance 1 Year	-0.05		+0.05	$\times 10^{-6}$	
	Aging Tolerance 10 Year	-0.3		+0.3	$\times 10^{-6}$	



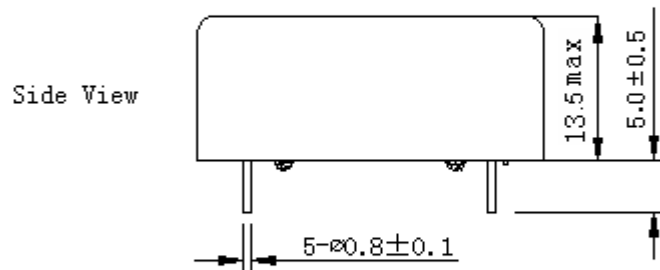
Power Supply	Supply Voltage	11.4	12.0	12.6	V	
	Steady Consumption			200	mA	@25°C
	Warm up current			500	mA	
	Warm-Up Time			5	minutes	@25°C ±1°C within $\pm 0.05 \times 10^{-6}$ of final frequency with reference after 1 hour on.
Voltage Control Characteristics	Frequency Tuning Range			-0.5	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=2.5V$.
		-0.1		+0.1	$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to exactly 10.00MHz.
		+0.5			$\times 10^{-6}$	$V_c=5.0V$. measurement referenced to $V_c=2.5V$.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	100				KΩ
Phase Noise	Phase Noise		-120	-115	dBc/Hz	1Hz
			-147	-142		10Hz
			-160	-155		100Hz
			-168	-163		1KHz
			-172	-167		10KHz
			-173	-168		100KHz
			-173	-168		1MHz
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	Not humidity sensitive.				
	Vibration	Test Condition: 0.75mm ;acceleration:10g;10Hz~500Hz, one cycle per 30 min, test 2 hour. (3 times for each 3 directions X , Y , Z), IEC 68-2-06 Test Fc.				
Shock	50g; 11ms; 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)



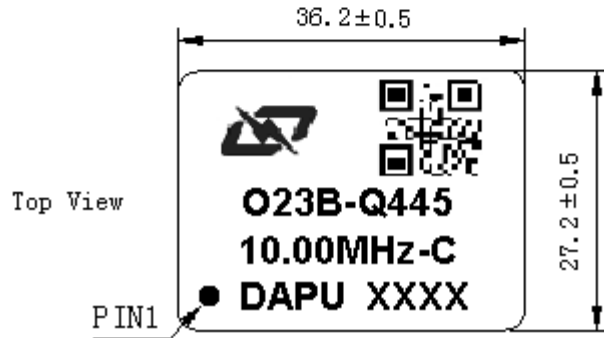
Right View



Side View

PIN FUNCTION

PIN	NOTATION	FUNCTION
1	VCC	Supply Voltage
2	NC	Not Connect
3	VC	Control Voltage
4	GND	GND
5	OUTPUT	RF Output

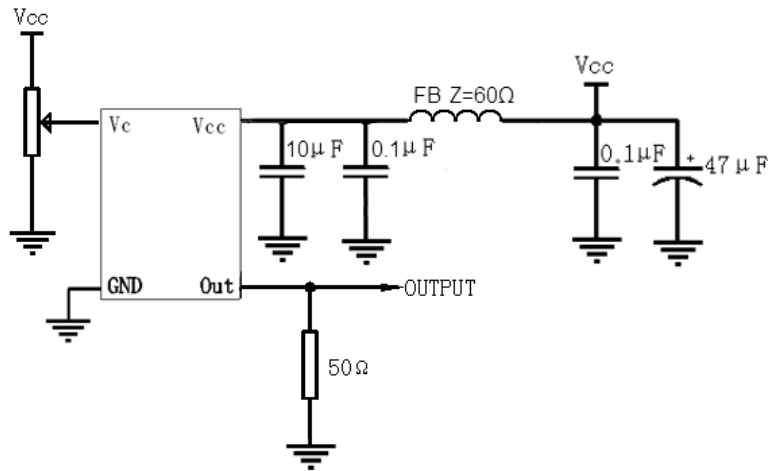


Top View

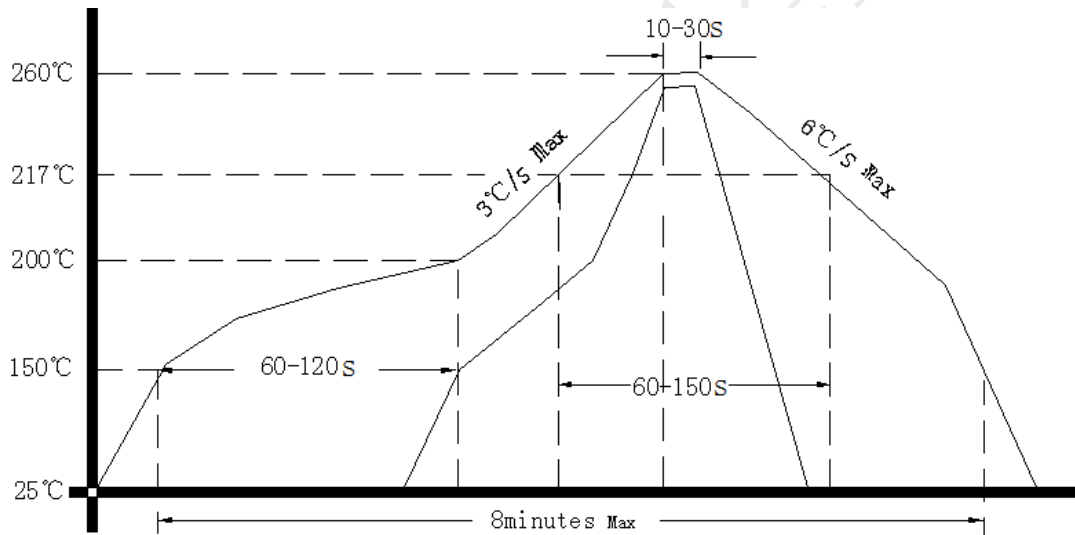
- Note1:** Tolerance ± 0.20 mm without mark
- Note2:** The first two xx representative: week
After two xx representative: year
- Note3:** Referential weight 20.7g
- Note4:** NC is not connect



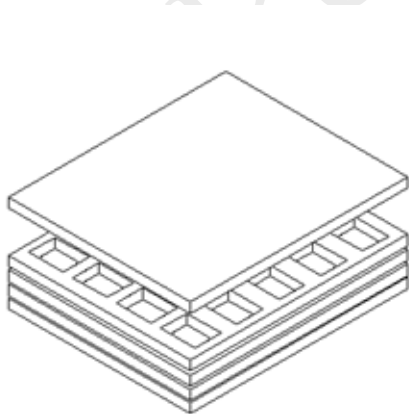
3. Test Circuit



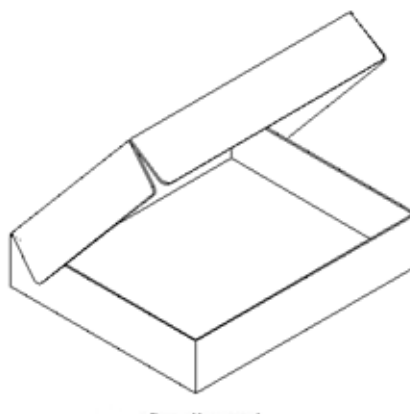
4. Reflow Soldering Curve (RoHS)



5. Package(mm)



Buffer material



Cardboard
Max 20pcs. circulator

