

Customer Code : _____

DATASHEET

DAPU P/N: R55-A445-10.00MHz

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2024.12.16			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2024.12.16



1. Electrical Parameters

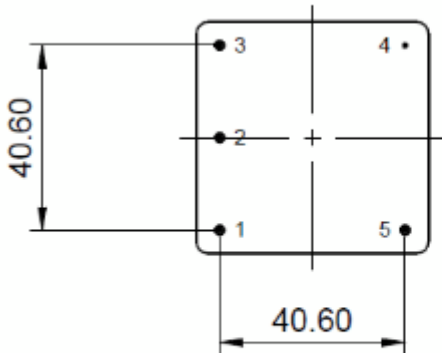
MODEL: R55-A445-10.00MHz							
Item	Description	Parameters			Unit	Test Condition	
		Min.	Typ.	Max.			
Output	Frequency	10.00			MHz		
	Output Waveform	Sine wave					
	Level	7	11	13	dBm		
	Load	50			Ω		
	Harmonics Suppression			-40	dBc		
	Spurious Suppression			-70	dBc		
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-1.5		+1.5	$\times 10^{-9}$	T_A varied from -30°C to 65°C , measurement referenced to frequency observed with $f_{\text{ref}}=(f_{\text{max}}+f_{\text{min}})/2$, $V_{\text{cc}}=12\text{V}$, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$, temperature variable speed less than 2°C per minute.	
	Initial Frequency Tolerance	-0.05		+0.05	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12\text{V}$, $V_c=2.5\text{V}$, and after 15 minutes of operation, within 30 days after ex-works.	
	Frequency Tolerance vs. Supply Voltage	-0.5		+0.5	$\times 10^{-9}$	measurement referenced to frequency observed $T_A=25^{\circ}\text{C}$, V_{cc} varied from 11.4V to 12.7V, $V_c=2.5\text{V}$, $O_{\text{load}}=50\Omega$.	
	Frequency Tolerance vs. Load	-0.5		+0.5	$\times 10^{-9}$	5% load change measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12\text{V}$, $V_c=2.5\text{V}$, and $O_{\text{load}}=50\Omega$.	
	Short-Term Stability: Allan Variance			8		$\times 10^{-11}$	Temperature stability, no EMI/EMC or other interference, test after power for 1 hour ref. to 25°C ; 1s.
				2		$\times 10^{-11}$	Temperature stability, no EMI/EMC or other interference, test after power for 1 hour ref. to 25°C ; 10s.
				6		$\times 10^{-12}$	Temperature stability, no EMI/EMC or other interference, test after power for 1 hour ref. to 25°C ; 100s.
	Retrace	-0.02		+0.02	$\times 10^{-9}$		
	Magnetic Field Sensitivity	DC (± 2 Gauss): $< \pm 0.04\text{ppb/Gauss max}$					
	Aging Tolerance Per Day	-0.005		+0.005	$\times 10^{-9}$	V_{cc}, T_A constant measurement referenced to frequency observed with $T_A=25^{\circ}\text{C}$, $V_{\text{cc}}=12\text{V}$, $V_c=2.5\text{V}$, and after 30 days of operation.	
Aging Tolerance Per Month	-0.05		+0.05	$\times 10^{-9}$			



Power Supply	Supply Voltage	11.4	12	12.7	V	
	Steady Consumption			500	mA	@25°C
	Warm up current			1700	mA	
	Warm-up time	5mins to lock status, 10mins to optimum frequency and power performance, Lock Monitor: Pin 2 is high (5V) when out of lock and low (0V) when locked				
Voltage Control Characteristics	Frequency Tuning Range			-5	$\times 10^{-9}$	$V_c=0V$. measurement referenced to $V_c=2.5V$.
		-0.05		+0.05	$\times 10^{-6}$	$V_c=2.5V$. measurement referenced to exactly 10.00MHz.
		+5			$\times 10^{-9}$	$V_c=5.0V$. measurement referenced to $V_c=2.5V$.
	Linearity			10	%	
	Slope	Positive				
	Input Impedance	10				K Ω
Phase Noise	Phase Noise		-67		dBc/Hz	1Hz
			-95			10Hz
			-127			100Hz
			-140			1KHz
			-148			10KHz
			-150			100KHz
Environmental Conditions	Operable Temperature	-30		+65	°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; JEDEC JESD22-A115C.				
	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				

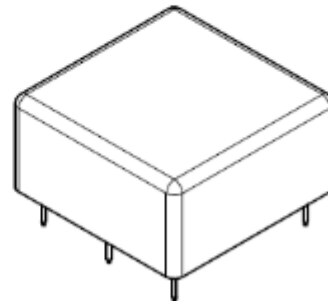
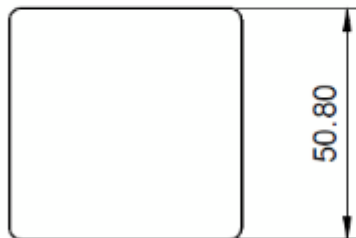
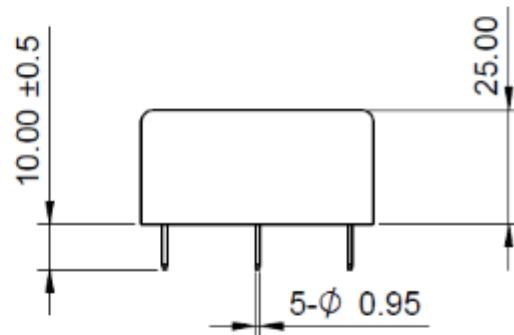
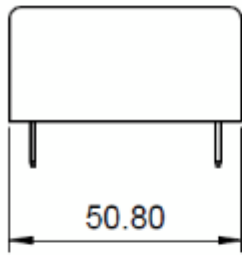


2. Mechanical Structure(mm)



Pin Connections

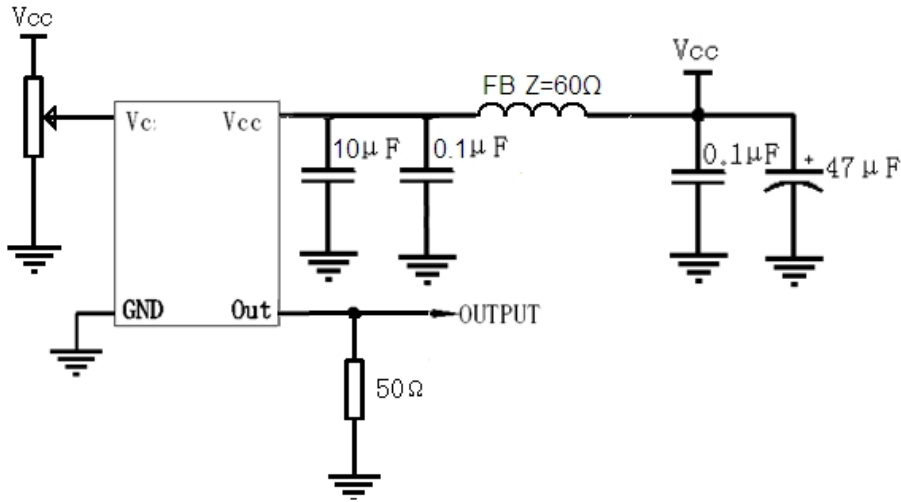
1. Frequency Control
2. Lock Monitor
3. Output
4. GND
5. +Vs



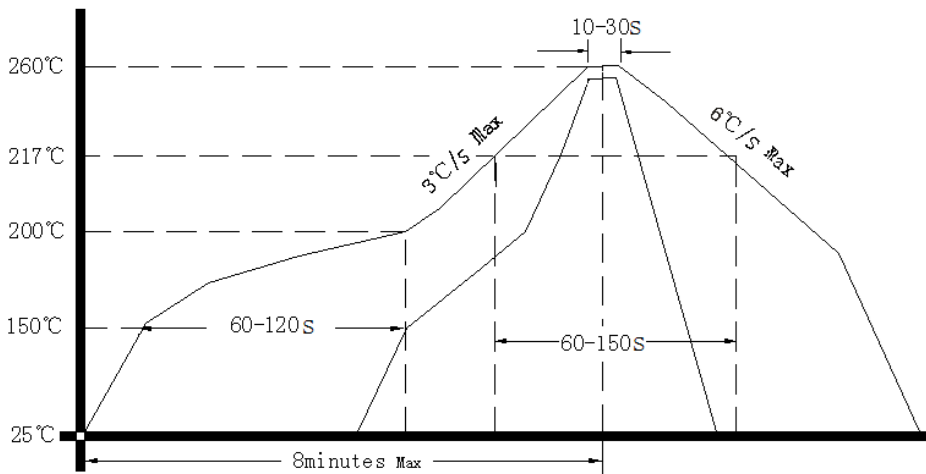
Note1: Tolerance $\pm 0.2\text{mm}$ without mark



3. Test Circuit



4. Reflow Soldering Curve (RoHS)



5. Package (mm)

