

Customer Code : _____

DATASHEET

DAPU P/N: **T936-G313-89.60MHz**

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DAPU			Customer Approval
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2023.07.20			

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Table of amendment

Version	Revision contents	Prepared by	Revised date
1.0	The first issued	<i>Amway</i>	2023.06.05
1.1	The “Input Current” “Frequency Tuning Range”changed	<i>Amway</i>	2023.06.13
1.2	The “Mechanical Structure” changed	<i>Amway</i>	2023.07.20



1. Electrical Parameters

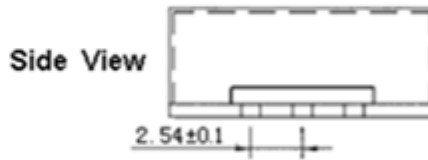
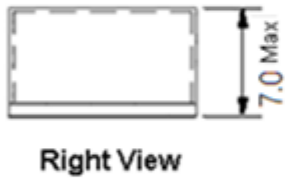
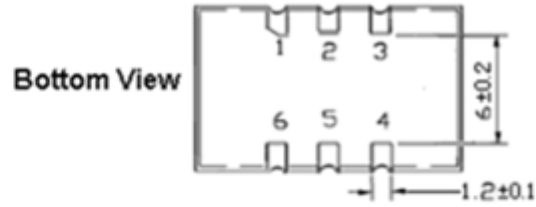
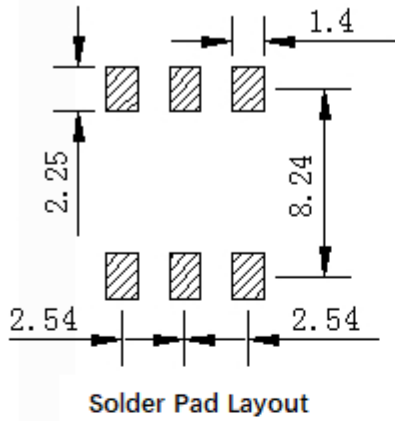
MODEL: T936-G313-89.60MHz						
Item	Description	Parameters			Unit	Test Condition
		Min.	Typ.	Max.		
Output	Frequency	89.60			MHz	
	Output Waveform	HCMOS				
	Output Low Voltage			0.4	V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Output High Voltage	2.4			V	$V_{cc}=3.3V, O_{load}=15\text{ pF}$
	Duty Cycle	45	50	55	%	@50%
	Rise / Fall Time (10%~90%)			5	ns	@25°C
	Load	15			pF	
Frequency Stabilities	Frequency Tolerance vs. Operating Temperature Range	-1		+1	$\times 10^{-6}$	T_A varied from -40°C to 85°C, measurement referenced to frequency observed with $f_{ref}=(f_{max}+f_{min})/2, V_{cc}=3.3V, V_c=1.65V, O_{load}=15\text{ pF}$, temperature variable speed less than 2°C per minute.
	Initial Frequency Tolerance	-1		+1	$\times 10^{-6}$	Measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=3.3V, V_c=1.65V$ within 30 days after ex-works.
	Frequency Tolerance vs. Supply Voltage	-0.1		+0.1	$\times 10^{-6}$	measurement referenced to frequency observed $T_A=25^\circ\text{C}, V_{cc}$ varied from 3.13V to 3.47V, $V_c=1.65V$ and $O_{Load}=15\text{ pF}$.
	Frequency Tolerance vs. Load	-0.1		+0.1	$\times 10^{-6}$	5% load change measurement referenced to frequency observed with $T_A=25^\circ\text{C}, V_{cc}=3.3V, V_c=1.65V$, and $O_{Load}=15\text{ pF}$.
	Aging Tolerance 1 Year	-1		+1	$\times 10^{-6}$	$T_A=25^\circ\text{C}, V_{cc}=3.3V, V_c=1.65V$ and after 1h of operation.
	Aging Tolerance 20 Years	-2		+2	$\times 10^{-6}$	
Power Supply	Input Current		30	40	mA	@25°C, $V_{cc}=3.3V, V_c=1.65V, O_{load}=15\text{ pF}$.
	Supply Voltage	3.13	3.3	3.47	V	



Voltage Control Characteristics	Frequency Tuning Range	-15		-8	$\times 10^{-6}$	$V_c=0V$. measurement referenced to $V_c=1.65V$
		-1		+1	$\times 10^{-6}$	$V_c=1.65V$. measurement referenced to exactly 89.60MHz
		+8		+15	$\times 10^{-6}$	$V_c=3.3V$. measurement referenced to $V_c=1.65V$
	Deviation Slope	Positive				
	Input Impedance	10			K Ω	
Phase Noise	Phase Noise		-80		dBc/Hz	10Hz
			-115			100Hz
			-130			1KHz
			-140			10KHz
			-145			100KHz
			-150			1MHz
			-150			10MHz
Environmental Conditions	Operable Temperature	-40		+85	$^{\circ}C$	
	Storage Temperature	-55		+105	$^{\circ}C$	
	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	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 ($^{\circ}C$)	-10~35 $^{\circ}C$				

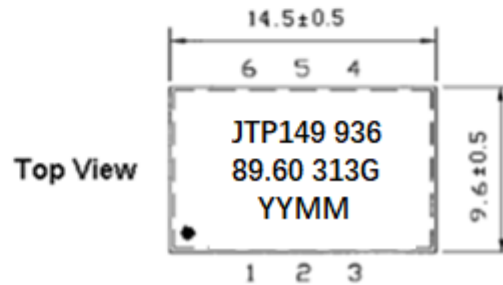


2. Mechanical Structure(mm)



PIN FUNCTION

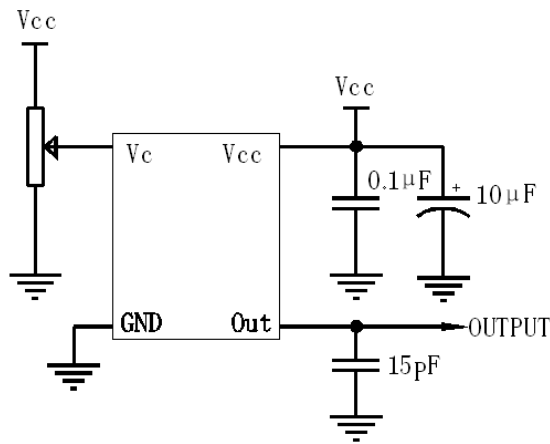
1	VC
2	NC
3	GND
4	OUTPUT
5	NC
6	VCC



- Note1:** Tolerance $\pm 0.2\text{mm}$ without mark
- Note2:** The first two YY representative: year
After two MM representative: month
- Note3:** Referential weight 2.2g
- Note4:** NC is not connect



3. Test circuit



4. Reflow Soldering Curve (RoHS)

