

Temperature test report

(1) Temperature Test



Testing Organization:
Temwell Corporation



Testing Machine:
Temperature & Humidity Tester Chamber
THS-A4C-100 STD

Testing Specification:
Operation Temperature: - 30°C ~ + 70°C
Storage Temperature: - 30°C ~ + 80°C

(2) Test subject:



Item:
Helical Band Pass Filter Toko Type K series
1. K2RB-425.33M

Require:
Operation Temperature: - 30°C ~ + 70°C
Storage Temperature: - 30°C ~ + 80°C

(3) Testing and test result:

Part number 1

K2RB-425.33M

Electrical Characteristics Spec. Approval Sheet

Parts Name : K2RB-425.33M (Double Tuning 5R2)

Date : MAR.09.2005

(1) For -30°C~+70°C Temperature ΔF Draft vs. Spec's Approval.

Items	Temp °C	Time Age Hour	Fo MHz	BW(MHz) Fo to ~ -(-3dB)	BW(MHz) Fo to ~ +(-3dB)	Total -3BW (MHz)	IL (dB)	R.L. S11 (dB)	Atten. Fo-50M (dB)	Atten. Fo+50M (dB)	Pass
SPEC	-30°C~+70°C	--	425.33	> 5.0	> 5.0	> 10.0	< 3.5	> 12.0	>30.0	>28.0	Pass

	Temp °C	Time Age Hour	Fo MHz	BW(MHz) Fo to ~ -(-3dB)	BW(MHz) Fo to ~ +(-3dB)	Total -3BW (MHz)	IL (dB)	R.L. S11 (dB)	Atten. Fo-50M (dB)	Atten. Fo+50M (dB)	Pass
f1	-30°C	1.5H	425.33	6.63	8.77	15.40	2.49	11.98	34.38	30.29	Pass
f2	-20°C	0.5 H	425.33	6.80	8.63	15.43	2.52	12.23	34.43	30.22	Pass
f3	-10°C	0.5 H	425.33	7.07	8.47	15.54	2.56	12.57	34.59	30.19	Pass
f4	+0°C	0.5 H	425.33	7.23	8.30	15.53	2.66	12.89	34.69	30.14	Pass
f5	+10°C	0.5 H	425.33	7.47	8.13	15.60	2.70	13.10	34.80	30.09	Pass
f6	+25°C	0.5 H	425.33	7.80	7.80	15.60	2.77	13.50	34.97	29.93	Pass
f7	+40°C	0.5 H	425.33	8.43	7.27	15.70	2.85	13.65	35.30	29.83	Pass
f8	+50°C	0.5 H	425.33	8.70	6.83	15.53	2.95	13.65	35.49	29.74	Pass
f9	+60°C	0.5 H	425.33	9.63	6.00	15.63	3.21	13.29	36.02	29.40	Pass
f10	+70°C	0.5 H	425.33	9.90	5.77	15.67	3.27	12.96	36.10	29.35	Pass
f11	+80°C	0.5 H	425.33	10.07	5.67	15.74	3.34	12.67	36.19	29.27	Note

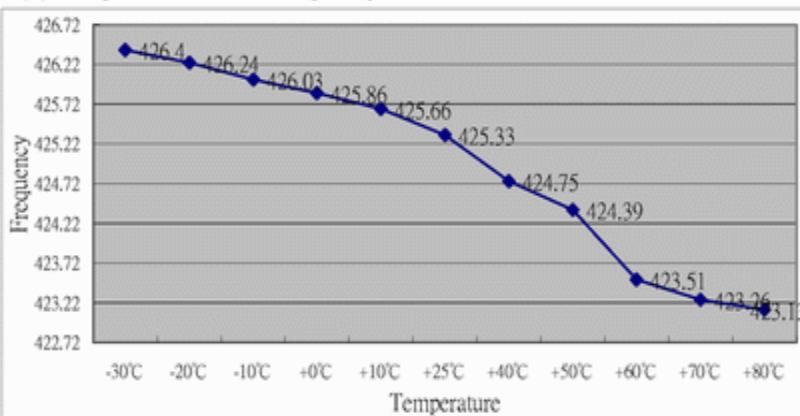
Note : The aging test data at +80°C is just only for your kind reference.

Temperature Aging Test Report

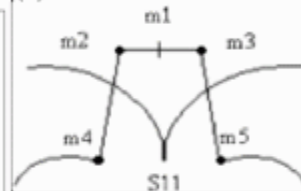
(2) Temperature & Time Process & Fo Frequency

	Temp °C	Time Age Hour	$\Delta f(\%)(MHz)$ Temp. Draft (-30°C~+70°C) < Fo×0.5% (Tolerance)	Fo MHz	At -3dB MHz	At -3dB MHz	-3BW MHz	IL (dB)	S11 (dB)	Atten. Fo-50M (dB)	Atten. Fo+50M (dB)
f1	-30°C	1.5H	0.251%(1.07M)	426.40	418.70	434.10	15.40	2.38	11.93	34.38	30.29
f2	-20°C	0.5H	0.213%(0.91M)	426.24	418.53	433.96	15.43	2.46	13.02	34.43	30.22
f3	-10°C	0.5H	0.164%(0.70M)	426.03	418.26	433.80	15.54	2.54	13.14	34.59	30.19
f4	+0°C	0.5H	0.124%(0.53M)	425.86	418.10	433.63	15.53	2.62	13.26	34.69	30.14
f5	+10°C	0.5H	0.077%(0.33M)	425.66	417.86	433.46	15.60	2.68	13.37	34.80	30.09
f6	+25°C	0.5H	0.000%(0.00M)	425.33	417.53	433.13	15.60	2.77	13.57	34.97	29.93
f7	+40°C	0.5H	0.136%(0.58M)	424.75	416.90	432.60	15.70	2.86	13.57	35.30	29.83
f8	+50°C	0.5H	0.221%(0.94M)	424.39	416.63	432.16	15.53	2.91	13.54	35.49	29.74
f9	+60°C	0.5H	0.427%(1.82M)	423.51	415.70	431.33	15.63	3.12	13.93	36.02	29.40
f10	+70°C	0.5H	0.486%(2.07M)	423.26	415.43	431.10	15.67	3.16	13.79	36.10	29.35
f11	+80°C	0.5H	0.517%(2.20M)	423.13	415.26	431.00	15.74	3.20	13.68	36.19	29.27

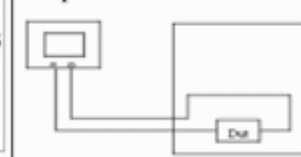
(3) Temperature VS Fo Frequency



(4) Makers



(5) HP-8714E Temperature Chamber



Result

PASS