



Worldwide Expert : VHF UHF Helical BandPass Filter / Toko Alternative Filter

Temwell Power Module Bandpass Filter
Changeable Frequency and Bandwidth with 3 different Connector

any Frequency Band
Changeable Bandwidth
High Isolation

Custom BandPass Filter
(Changeable Filter spec)

Temwell Attenuation Upgrading Filter

Quadruple Filter
Quintuple Filter
Sextuple Filter

Attenuation Value +10 dB at each upgrading (Fo.BW, NO CHANGE)

TEMWELL Corporation

TECHNOLOGY
Independent TEMWELL INNOVATION

High Attenuation BP Filter
Custom Service in dB+
(Custom Fc & BW & Att)

Temwell Design

Modulized Power Bandpass Filter
* 3 Connector type*
(Flexible Filter spec)

Temwell Design

Obsolete Toko type Standard Filter
5HT/5HW/7HT/7HW
(Standard replaced Filter)

Temwell Design

Total solution for RF Design
4 popular RF topic
(Custom Frequency Filter)

Temwell Design

Temwell Total Solution for RF Application

Aircraft Comm.
RF Design Application total service
Sub-1GHz
PWMS
ITS Comm.

Alternative Toko type standard Bandpass Filter
Series: 5HW,367MN, 5HT,7HW,252MXPR,302MXPR, 7HT

Standard spec items in stock
Custom Toko spec also available

5W Series
7H Series

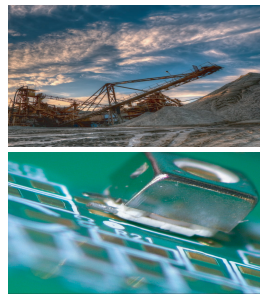


Worldwide Expert : RF & Microwave Component Supply

All Series / Full Support Your best RF Component Source *



Communication
Aerospace & Defense
Medical & Industries
Telecommunications
Test & Measurement
Automotive
Navigation
Satellite
Government
Oil & Gas Energy
Maritime
Cellular
Mining
Aviation
Custom Design
Obsolete solutions



- ★ LTE Notch filters (SMD/ High Power)
- ★ SMD Dielectric Filter/Duplexers
- ★ SMD Ceramics Filter
- ★ SMD LC Filter
- ★ SMD Multiplexers
- ★ Bass Pass/Low Pass/High Pass Filters
- ★ Low PIM
- ★ Cavity filter & Duplexer
- ★ Spiral & Comb filter
- ★ Suspended Stripline Filter
- ★ Power Splitter/ Combiner/ Coupler
- ★ D-TV Tubular Filter
- ★ CATV Filter
- ★ Triplexers
- ★ Tunable Coils/ Molded Coils/SMD Coils
- ★ Ceramic filters/ Crystal filters
- ★ Attenuator/ Antenna/ Accessory
- ★ Obsolete Components/ OEM Solutions

★ **Temwell & Temstron Service** ★

1. Multiple RF Suggestion: based 20 years experience, we support multiple RF Component solution to you for reference, including Power Splitters/ Combiners, Crystal Filters, Ceramic Filters, Valuable coils, Inductors, RF Miniature Receiver Modules, Broadband Passband filter, Dielectric filter, Low / High Pass filter, Suspended Filter, Stripline filter, Cavity filter, Notch filter, Waveguide filter, etc.
2. Quick design : you could easily have your customized RF Bandpass Filter & Power Filter/ Duplexer/ Antenna Splitter for your specific system design in just 14 days, and any other request RF components in 4 weeks.
3. Flexible Specification: Temwell Bandpass Helical Filter sustains Specification Change Service (Changeable Frequency, BW, Attenuation, Impedance and Application type), Easy match into circuit (R.L.: >16~20dB), Easy adjust frequency (Tunable Centre Frequency) and Strong Screw Torque (Bear > 60 ~ 100 gf.cm), also support plenty of RF Design solution as well.

★ **Temwell & Temstron Quality** ★

1. High technology : Temwell Corporation is the expert in using $\lambda/4$ technology to design RF Helical Filter and has over 20 years experience in RF industry to supply all kinds of RF & Microwave component to you as your request.
2. Reliable Technical Testing : All Temwell product pass Bending TEST, Pulling TEST, Soldering TEST, Temperature TEST, Mechanical Shock Test and Sinusoidal Vibration Test, or any requested reliability testing.
3. All filter parts has finished demo spec sheet online with S2P Data to you for reference. All information, performance and data are practical and reliable.
4. Quality Guarantee : All filter performance and curve are measured and inspected by Agilent Networking Analyzer to maintain the precision and accuracy. Also, our processes are verified by ISO9001:2008.

**Temwell Filter Online Search
Website Shop Store 72hr Delivery**

Designer & Manufacturer & Exporter



--- **RF Bandpass Helical Filter & Multiplexer supplier --- World Leader ---**

TEMWELL GROUP
Temwell Co. (Filter Expert)
E-mail: joe@temwell.com.tw
Temstron Ltd. (RF Parts)
E-mail: sara@temstron.com

駿凱電技股份有限公司
8F-1, No.51, Sec.1, Minsheng E. Rd., Taipei 104, Taiwan
Tel: 886-2-25652500 (4L)
E-mail: info@temwell.com.tw
Website: www.temwell.com.tw



Made in Taiwan





TEMWELL - Customized Service Expert in Helical Filter

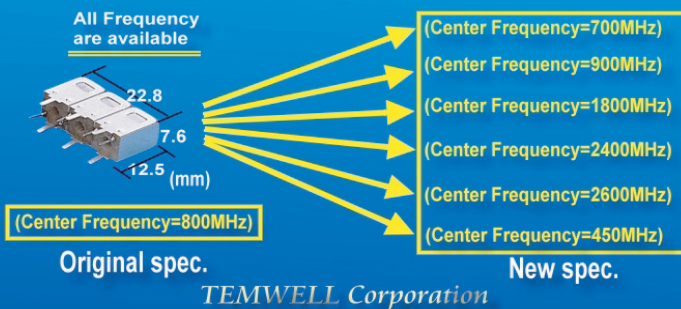
Temwell is the worldwide expert of RF/IF BandPass Filter in designing and manufacturing. We have over 20 year experience in developing and building VHF UHF Helical BandPass Filter. Based on our abundant experience, we provide not only Customized service in Frequency change Service, Bandwidth Change Service, Impedance Change Service and Attenuation Change Service, but also the Filter Modulized service, upgrading the filter with your prefer Frequency, Bandwidth, Impedance and Attenuation spec. into module type without any spec change and loss.

Your developing problem in Spec. Change, Temwell will be your best solution.



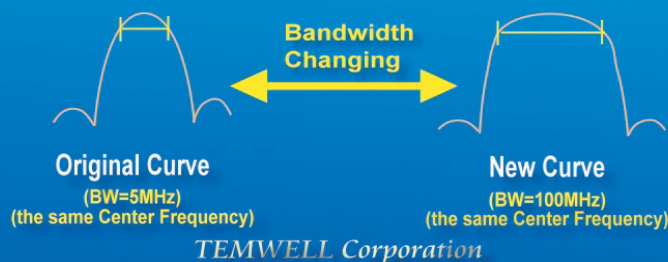
Temwell Frequency Change Service

-Changeable range: 45~2600MHz available-



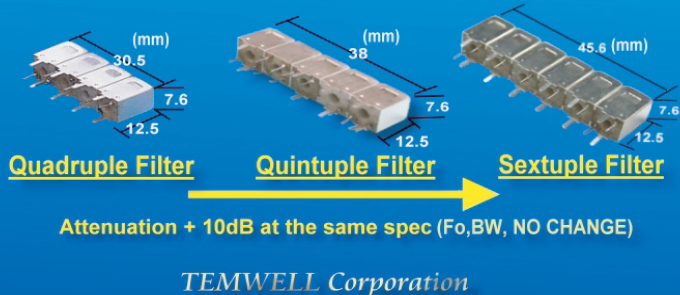
Temwell Bandwidth Change Service

-Changeable BW from 2MHz to 120MHz-
-Any specific BW value all available~



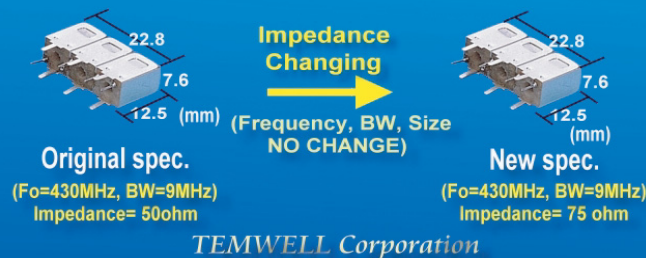
Temwell Attenuation Adding Service

-Adding Attenuation value-



Temwell Impedance Change Service

-Changeable Impedance between 50ohm & 75ohm-
under exactly same spec value



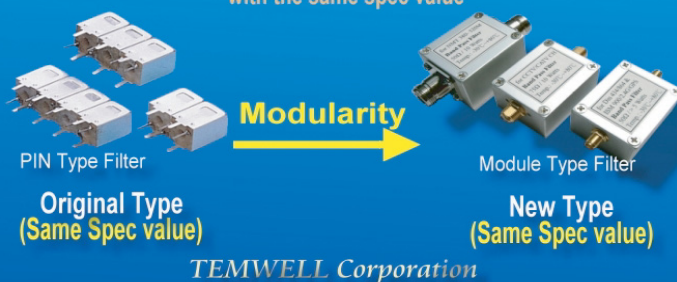
Temwell Filter Size Change Service

-Excellent Performance with Smaller Size Diagram-
Changeable Frequency & Bandwidth & Great Rejection



Temwell Filter Modulized Service

-Changeable Type between Pin Type and Connector Type-
with the same spec value

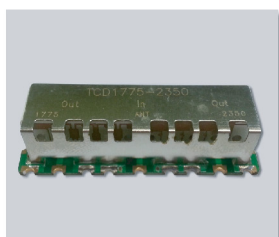


VHF UHF SHF Diplexer & Multiplexer & Cavity & Waveguide

RF Design Total Solution



SMD Dielectric Filter



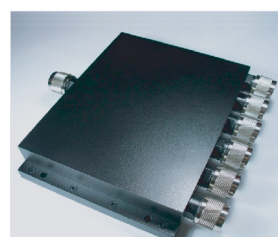
SMD Multiplexer



Suspended Filter



Notch Filter



Splitter/Coupler

MADE IN TAIWAN

ISO 9001:2008
BUREAU VERITAS
Certification

TECHNOLOGY

Independent TEMWELL
INNOVATION
QUALITY FIRST, TECHNOLOGY FIRST, AND SUSTAINABLE MANAGEMENT

REACH
Compliant

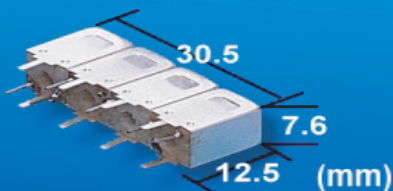
ROHS
Compliant



Filters are everywhere : in our wireless device, our vehicles, on emergency communication system, in house, and in the hospitals on which depend for our high-value quality of life. Increased automation and environmental demands are creating new dynamism in sensitivity, thus TEMWELL enable to improve attenuation to meet customer's request on the filters and bespoke service on Center Frequency and Bandwidth, to help customer on developing and applying on the latest solution.

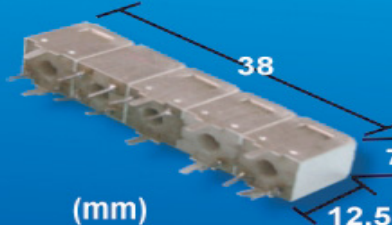
Quadruple Filter

TF Series/ TFW Series



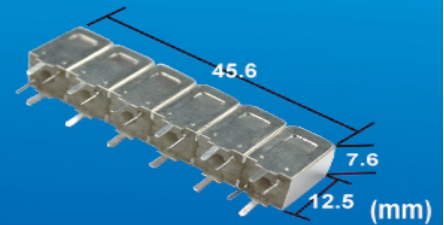
Quintuple Filter

TV Series/ TVW Series



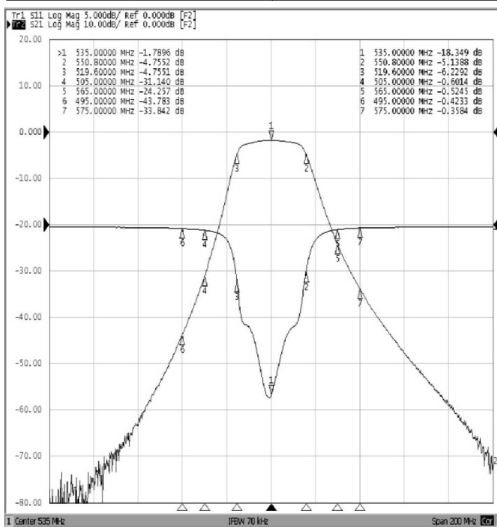
Sextuple Filter

TS Series/ TSW Series



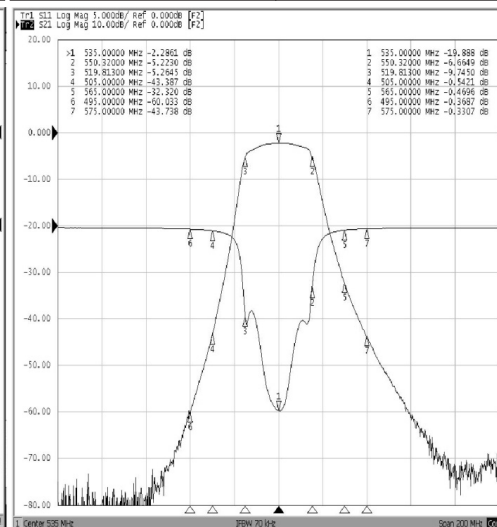
★ Demo Performance - 4 Pole Filter

Type	Specify
Center Frequency	535 MHz
-3dB Bandwidth	Type 28 MHz
Insertion Loss	Type 3.5 dB
Attenuation at Fo-40MHz	Type 43 dB
Attenuation at Fo+40MHz	Type 33 dB
Return Loss	Min. 12 dB
Impedance	50 OHM
Ripple	< 1 dB



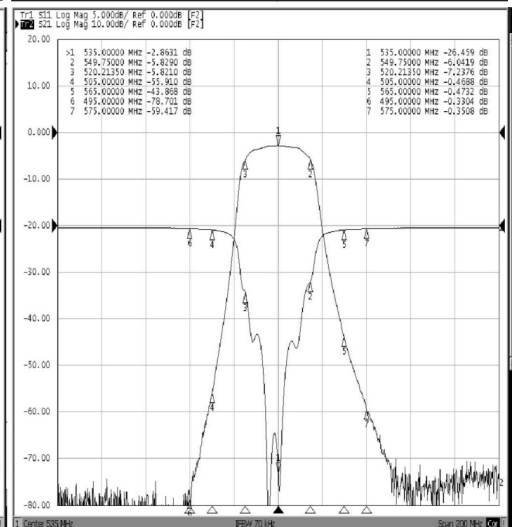
★ Demo Performance - 5 Pole Filter

Type	Specify
Center Frequency	535 MHz
-3dB Bandwidth	Type 28 MHz
Insertion Loss	Type 3.5 dB
Attenuation at Fo-40MHz	Type 60 dB
Attenuation at Fo+40MHz	Type 43 dB
Return Loss	Min. 12 dB
Impedance	50 OHM
Ripple	< 1 dB



★ Demo Performance - 6 Pole Filter

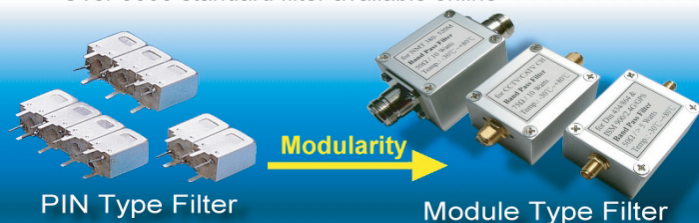
Type	Specify
Center Frequency	535 MHz
-3dB Bandwidth	Type 28 MHz
Insertion Loss	Type 3.5 dB
Attenuation at Fo-40MHz	Type 79 dB
Attenuation at Fo+40MHz	Type 59 dB
Return Loss	Min. 12 dB
Impedance	50 OHM
Ripple	< 1 dB



UHF Power Module Bandpass Filter

Modulized RF Bandpass Filter from Pin type filter Customized

Over 3000 standard filter available online



TEMWELL Corporation

Modulizing over 3000 RF Bandpass Filter into connector type power filter under no spec change in just 21days. What you see, what you'll gain. Come for make your own Power Module Filter. There are over 3000 different filter spec catalog online to you for reference, or take a view in the below special catalog.

☆ How to request ☆

- ① : Select the suitable PIN from Temwell Catalog
- ② : Send a enquiry to request Power Module Filter
- ③ : Inform the connector type, N, SMA, F.
- ④ : Lead time: Only 21days, Quickly Delivery



Filter Parts Number	Freq.	-3dBW	IL dB	Attenuation (dB)
TT67546F-738M	738M	10M	4.0	(F0-50M)45 /(F0+50M)35
TT67846B-725M	725M	20M	3.5	(F0-50M)38 /(F0+50M)27
TT67230A-730M	730M	40M	2.5	(F0-50M)24 /(F0+50M)16
TT67803B-725M	725M	60M	2.0	(F0-120M)42 /(F0+120M)25
TT67803F-725M	725M	70M	2.0	(F0-150M)37 /(F0+150M)32
TT67876B-725M	725M	90M	2.0	(F0-200M)55 /(F0+200M)25
TT63337F-725M	725M	120M	1.5	(F0-150M)25 /(F0+150M)21
TT63384F-750M	750M	130M	2.0	(F0-200M)34 /(F0+200M)25
TT6870A-780M	780M	10M	4.5	(F0-20M)20 /(F0+20M)14
TT67630E-800M	800M	20M	3.5	(F0-120M)55 /(F0+120M)55
TT67476D-775M	775M	35M	3.0	(F0-100M)50 /(F0+100M)40
TT67791B-775M	775M	40M	2.5	(F0-120M)44 /(F0+120M)30
TT67797B-775M	775M	50M	2.0	(F0-120M)43 /(F0+120M)27
TT63353F-900M	900M	165M	2.0	F0-150M)45 /(F0+150M)54
TT67248A-915M	915M	10M	4.5	(F0-150M)39 /(F0+150M)21
TT67218A-915M	915M	20M	3.5	(F0-150M)39 /(F0+150M)19
TT67449A-902.5M	902.5M	30M	3.0	(F0-150M)37 /(F0+150M)34

Filter Parts Number	Freq.	-3dBW	IL dB	Attenuation (dB)
TT67793B-915M	915M	40M	3.5	(F0-150M)37 /(F0+150M)18
TT67414A-918.5M	918.5M	55M	2.5	(F0-150M)25 /(F0+150M)15
TT67609A-927M	927M	63M	2.5	(F0-200M)50 /(F0+200M)26
TT67867B-915M	915M	90M	2.5	(F0-200M)40 /(F0+200M)19
TT67861B-925M	925M	120M	3.0	(F0-200M)40 /(F0+200M)21
TT67868B-933M	933M	140M	2.0	(F0-200M)38 /(F0+200M)17
TT67862B-975M	975M	120M	2.5	(F0-200M)37 /(F0+200M)18
TT63338F-980M	980M	120M	2.0	(F0-200M)36 /(F0+200M)14
TTW3609B-1800M	1800M	105M	2.5	(F0-250M)41 /(F0+250M)17
TTW3900B-1840M	1840M	109M	2.0	(F0-300M)51 /(F0+300M)24
TTW3886E-1830M	1830M	208M	2.0	(F0-300M)50 /(F0+300M)20
TTW3919B-1875M	1875M	180M	2.0	(F0-300M)48 /(F0+300M)29
TTW3901E-1875M	1875M	217M	1.5	(F0-300M)41 /(F0+300M)24
TTW3868B-2400M	2400M	214M	2.5	(F0-400M)41 /(F0+400M)22
TTW3859B-2450M	2450M	100M	3.0	(F0-400M)39 /(F0+400M)21
TTW3840B-2450M	2450M	168M	3.0	(F0-400M)37 /(F0+400M)21
TTW3864B-2600M	2600M	226M	2.5	(F0-500M)45 /(F0+500M)22

VHF UHF Application Design Support

Temwell Bandpass PWMS Protect Filter

PWMS Signal protectable by BandPass Filter
Frequency Band: 740~790MHz & 180~267MHz



BandPass Filter with different Bandwidth for aircraft communication system

Airline Comm.
 Helicopter Comm.
 Rescue Comm.

Fc=144MHz
 Fc=430MHz

REACH Compliant
 ROHS Compliant

BandPass Filter with different Bandwidth for Intelligent Transport Systems (ITS)

Fc=433MHz
 Fc=315MHz
 Fc=868MHz
 Fc=902MHz

Information Collection
 Signal Control
 Better Navigation

REACH Compliant
 ROHS Compliant

BandPass Filter

- ◎ ITS device and equipment
- ◎ Frequency change for free
- ◎ Attenuation value upgradeable
- ◎ Spec change upon requests

Custom Filter for Sub-1GHz Band application

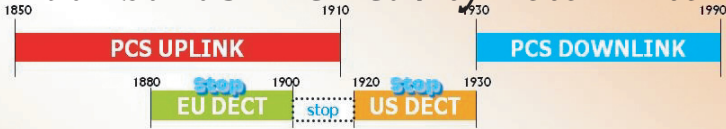
Sub-1GHz

REACH Compliant ROHS Compliant

BandPass Filter

SUB-1GHz Band	Fc	BW
TT6870A-783M	783M	8M
TTW3501B-783M	783M	8M
TT67242D-722.5M	722.5M	15M
TTW3491B-722.5M	722.5M	15M
TT6779B-868M	868M	15M
TTW3531B-868M	868M	15M
TT67840B-928M	928M	15M
TTW3662B-928M	928M	15M
TT67157B-433M	433M	15M
TTW3437A-433M	433M	15M
TT63231E-450M	450M	15M
TTW3438A-450M	450M	15M

Dual-bands DECT Cavity Notch Filter



- Assist system operate in the conflict with PCS uplink & DECT bands
- Stop Europe & USA DECT bands
- Apps: Cellular, Telecommunication, Mobile Station, Navigation

Stop Band Freq.	1880-1930 MHz
Stop Band Attenuation	≥ 30dB
Pass Band Freq.	1855-1870 & 1935-1970 MHz
Pass Band Insertion Loss	≤ 2.3dB
Pass Band Return Loss	≥ 18dB
Power Handling	≤ 50 Watt
In/Out Impedance	50 Ω
Connectors	SMA-Female
Dimension	140x140x34 mm



Referenced

LTE & GSM Band-Stop Filter



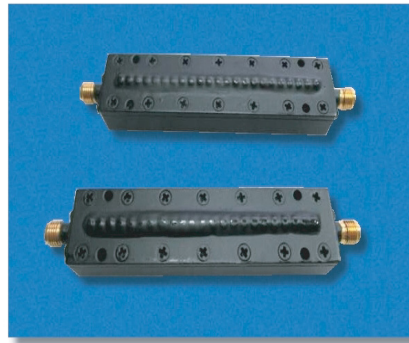
- ✓ Apps: Interference signal rejection, 2G 3G LTE tests of spurious emission
- ✓ Parameters can custom by request

	LTE Band 1	LTE Band 2	LTE Band 3-4	LTE Band 5	LTE Band 7
Stop Band	1940-1960MHz	1870-1890MHz	1722.5-1742.5MHz	826.5-846.5MHz	2525-2545MHz
Attenuation	>50dB	>50dB	>50dB	>50dB	>50dB
	LTE Band 8	LTE Band 13	LTE Band 17	LTE Band 20	LTE Band 25
Stop Band	887.5-907.5MHz	777-787MHz	704-716MHz	837-857MHz	1872.5-1892.5MHz
Attenuation	>50dB	>50dB	>50dB	>50dB	>50dB
	GSM850 CH 190	GSM900 CH 63	GSM1800 CH 699	GSM1900 CH 661	
Stop Band	835.5-837.5MHz	901.6-903.6MHz	1746.6-1748.6MHz	1799-1881MHz	
Attenuation	>50dB	>50dB	>50dB	>50dB	
Power	<50 Watt				
Impedance	50 ohm				
Connector	Input/Output: SMA-Female				

Satellite & Mobile Bandpass Filter

Feature:

- ★ Cavity Technology
- ★ Large Power Design
- ★ Frequency adjusted by request
- ★ Rejection adjusted by request
- ★ Surface color variable
- ★ Connectors type variable



Application:

- ★ C-Band : Satellite Communication, VSAT, Radar system
- ★ S-Band : Satellite Communication, Radar system
- ★ Ku-Band: Satellite Communication, Broadcast Sate system

Specification	
Parts Number	ST-A1614-S12
Center Freq (Fo)	6750 MHz
Bandwidth	600 MHz (6450~7050MHz)
Insertion Loss	<1.0dB
Stop Band Rejection	>80dB @DC~5500M, 11000~16500M >60dB @5500~6250M, 7250~11000M
Power Handling	<2 Watt
Temperature	-30C ~ +70C
Impedance	50 ohm
Connector	Input: SMA-Female Output: SMA-Male
Dimension	212x23x12 mm

C-Band 6750MHz

Specification	
Parts Number	ST-A1464-Q05
Center Freq (Fo)	2900 MHz
Bandwidth	30 MHz (2885~2915MHz)
Insertion Loss	<1.5dB
Stop Band Rejection	>40dB @Fo+/- 60MHz (DC~2840M, 2960~7000M)
Power Handling	<20 Watt
Temperature	-40C ~ +70C
Impedance	50 ohm
Connector	SMA-Female
Surface Color	Black Paint or Silver Plain
Dimension	97x30x20 mm

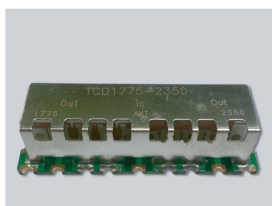
S-Band 2900MHz

Specification	
Parts Number	TBF-10.95/12.45-02SMA
Center Freq (Fo)	11.7 Ghz
Bandwidth	1500 MHz (10.95~12.45GHz)
Insertion Loss	<2.0dB
Stop Band Rejection	<0.3dB peak-peak in any 80MHz interval <1.2dB peak-peak within signal BW (1500MHz)
Rejection	>80dB @DC~10.25GHz >60dB @10.25-10.4GHz >80dB @13-14.5GHz, 15.05-16.55GHz
VSWR	<1.23 (-20dB)
Temperature	-30C ~ +70C
Impedance	50 ohm
Connector	SMA-K
Surface Color	Black Paint
Dimension	81x18x13 mm

Ku-Band 11.7GHz



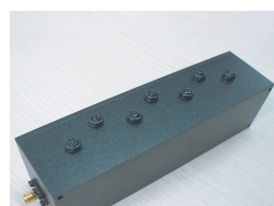
SMD Dielectric Filter



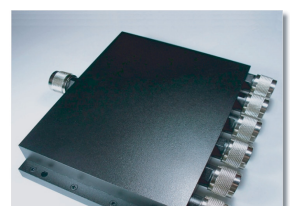
SMD Multiplexer



Suspended Filter



Notch Filter

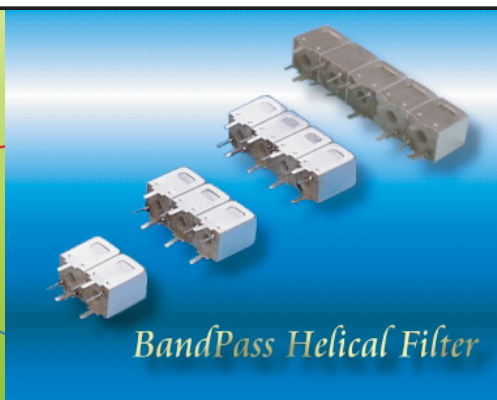
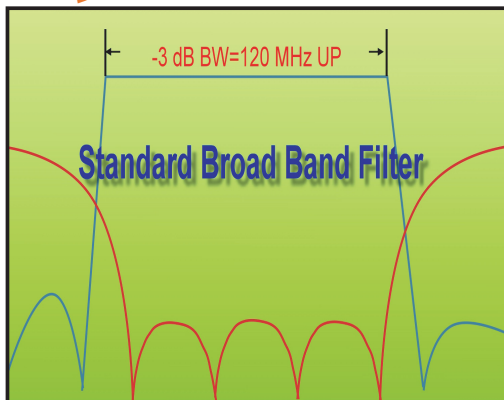


Splitter/Coupler

72 Hours
Delivery

Temwell Standard RF Helical BandPass Filter

Over 300 Standard Parts No. in stock on sale. Lead Time:72 hour shipping after payment.



Standard open frequency filter for Ham radio user

Ham Radio Freq.
146MHz, 223.5MHz,
435MHz, 915MHz,
1270MHz, 1282.5MHz

PIN Type Filter

TEMWELL Corporation

Standard BP Filter for BroadBand Application

Pin Type, Frequency range from 288MHz to 1.5GHz, 50ohm

TEMWELL Parts No.	-3 dB Bandwidth	TEMWELL Parts No.	-3 dB Bandwidth
TT63223B-288M	80MHz	TF64223B-288M	80MHz
TT67869B-350M	90MHz	TF69869B-350M	88MHz
TT63348B-375M	100MHz	TF64348B-375M	100MHz
TT6395F-450M	120MHz	TF64214B-450M	110MHz
TT63335F-480M	120MHz	TF64335F-480M	120MHz
TT6393F-530M	120MHz	TF6493F-530M	120MHz
TT63336F-575M	120MHz	TF64336F-575M	120MHz
TT67618F-625M	130MHz	TF69618F-625M	130MHz
TT63366B-650M	120MHz	TF64336B-650M	120MHz
TT63333F-666M	135MHz	TF64333F-666M	125MHz
TT63384F-750M	130MHz	TF64384F-750M	130MHz
TT63385F-800M	130MHz	TF64385F-800M	130MHz
TT63348F-805M	140MHz	TF64465F-805M	140MHz
TT63386F-850M	120MHz	TF64386F-850M	120MHz
TT63387F-900M	130MHz	TF64387F-900M	130MHz
TT67861B-925M	120MHz	TF69861B-925M	120MHz
TT67868B-933M	120MHz	TF69868B-933M	120MHz
TT67862B-975M	120MHz	TF69862F-966.5M	120MHz
TT63338F-980M	120MHz	TF64338F-980M	120MHz
TT67864B-1075M	120MHz	TF69864B-1075M	120MHz
TT63339F-1160M	120MHz	TF64339F-1160M	120MHz
TT63365B-1200M	120MHz	TF64365B-1200M	120MHz
TT63362F-1300M	200MHz	TF64362F-1300M	200MHz
TT67684A-1405M	110MHz	TF69684A-1405M	110MHz

Standard BP Filter for Amateur Ham Radio User

2pole & 3pole Pin Type, Frequency range: 146MHz~1282MHz, 50ohm

7H2/5W2 series			7H3/5W3 series		
TEMWELL Parts No.	Fo (M) / BW(M) / IL(dB)		TEMWELL Parts No.	Fo (M) / BW(M) / IL(dB)	
TD67281A-146M	146 / 8 / 2.5		TT67709B-146M	146 / 5 / 3.5	
TD6734B-223.5M	223.5 / 8 / 2.5		TT6762B-223.5M	223.5 / 9 / 3.0	
TD67410B-435M	435 / 31 / 1.5		TT67295B-435M	435 / 34 / 3.5	
TDW2630B-435M	435 / 33 / 2.5		TT67550E-915M	915 / 27 / 3.0	
TD67748B-915M	915 / 26 / 2.5		TTW3684B-915M	915 / 25 / 3.5	
TDW2553B-915M	915 / 29 / 3.5		TT67810B-1270M	1270 / 65 / 2.5	
TD67751B-1282.5M	1282.5 / 27 / 3.0		TTW3759B-1270M	1270 / 60 / 3.0	
TDW2575B-1282.5M	1282.5 / 29 / 5.0		TT67426D-1282.5M	1282.5 / 25 / 4.0	
-----	-----		TTW3554B-1282.5M	1282.5 / 24 / 5.5	

Standard BP Filter for 2-way Radio

3pole Pin Type, Frequency range: 70MHz~460MHz, 50ohm

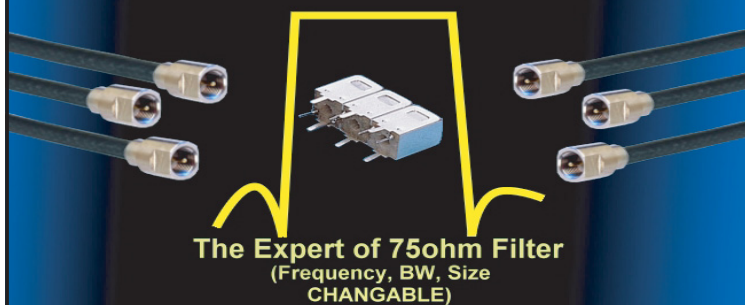
TEMWELL Parts No.	Fo (M) / BW(M) / IL(dB)	TEMWELL Parts No.	Fo (M) / BW(M) / IL(dB)
TT67188B-70M	70 / 4 / 5.0	TT63206B-160M	160 / 40 / 2.0
TT67487B-70M	70 / 9 / 3.0	TT67285B-180M	180 / 5 / 5.0
TT67674B-70M	70 / 12 / 2.5	TT67183B1-180M	180 / 12.0 / 2.5
TT63389B-70M	70 / 20 / 2.5	TT67670F-180M	180 / 20 / 2.0
TT6755D1-140M	140 / 5 / 3.5	TT67723B1-180M	180 / 30 / 2.0
TT67677B1-140M	140 / 10 / 3.0	TT67725B-180M	180 / 40 / 2.0
TT67381B-140M	140 / 20 / 3.0	TT67101A-460M	460 / 5 / 5.0
TT63218B1-140M	140 / 30 / 1.5	TT63232F-460M	460 / 12 / 3.0
TT6715B-160M	160 / 5.0 / 4.5	TT6774B1-460M	460 / 15 / 3.0
TT67711B-160M	160 / 10.0 / 3.0	TT67491B-460M	460 / 18 / 2.5
TT63447B-160M	160 / 20.0 / 2.5	TT63245F-460M	460 / 30 / 2.0
TT67377A-160M	160 / 26.0 / 4.5	TT67811B-460M	460 / 40 / 2.0
TT67444B-160M	160 / 32 / 2.0	-----	-----



Custom 75ohm Filter as Standard

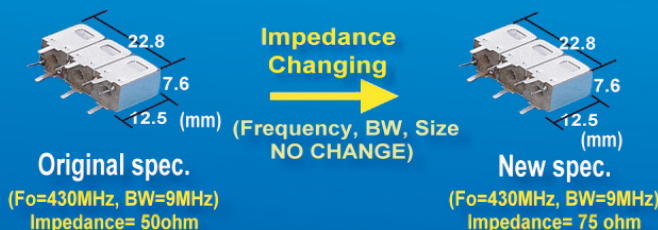
Temwell Customized 75 ohm Bandpass Filter

- Customized any filter spec in 75ohm Impedance -
- Changeable Frequency, B.W., Attenuation, Size Diagram, Layout, -



Temwell Impedance Change Service

- Changeable Impedance between 50ohm & 75ohm- under exactly same spec value



TEMWELL Corporation

Temwell Type K3BT/K3CT Series ----- Toko type 302MXPR(7HT-Triple Tuned) Series

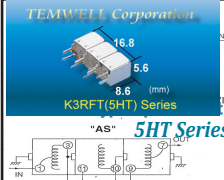
Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price	Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price
K3BT-370M-10M	302MXPR-1138D*	10.0	3.5	Online	K3BT-415M-16M	302MXPR-1109D	16.0	3.0	Online
K3BT-370M-16M	302MXPR-1138D	16.0	3.0	Online	K3BT-465M-15M	302MXPR-1110D	15.0	3.0	Online
K3BT-390M-10M	302MXPR-1137D*	10.0	3.5	Online	K3BT-500M-16M	302MXPR-1108D	16.0	3.0	Online
K3BT-390M-16M	302MXPR-1137D	16.0	3.0	Online	K3BT-680M-13M	302MXPR-1119D	13.0	3.5	Online
K3BT-410M-11M	302MXPR-1136D*	11.0	3.5	Online	K3CT1-833M-16M	302HXP-1111D	16.0	3.5	Online
K3BT-410M-16M	302MXPR-1136D	16.0	3.0	Online	K3CT1-833M-21M	302HXP-1111B	21.0	3.0	Online

Temwell Type K3B/K3BT/K3CT Series ----- Toko type 302MXP/HN/HA Series (Triple Tuned)

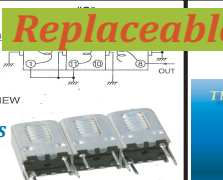
Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price	Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price
K3BT-415M-20M	302MXP-688D	20.0	3.0	Online	K3CT1-860.5M-23M	302HN-589B	23.0	4.0	Online
K3BT-425M-20M	302MXP-689D	20.0	3.0	Online	K3BT-880M-25M	302HN-052D	25.0	3.0	Online
K3BT-435M-20M	302MXP-690D	20.0	3.0	Online	K3CT1-904M-12M	302HA-018B	12.0	5.0	Online
K3BT-455M-20M	302MXP-691D	20.0	3.0	Online	K3CT1-904M-20M	302HA-018BTW	20.0	3.5	Online
K3B-485M-20M	302MXP-677A	20.0	2.5	Online	K3CT1-915M-12M	302HN-487B	12.0	5.0	Online
K3BT-510M-15M	302MXP-667D	15.0	3.5	Online	K3CT1-938M-15M	302HN-529B	15.0	4.5	Online
K3CT2-600M-20M	302MXP-606E	20.0	3.5	Online	K3CT1-947M-18M	302HN-493B	18.0	5.0	Online
K3BT-612M-18M	302HN-528D	18.0	3.5	Online	K3CT1-960M-12M	302HN-486B	12.0	6.0	Online
K3CT2-651M-10M	302HN-565E	10.0	5.0	Online	K3CT1-1015M-25M	302HN-071B	25.0	4.0	Online
K3BT-835M-20M	302HN-051D	28.0	3.0	Online					

Temwell Type K2B1 Series ----- Toko type (7HW - Triple Tuned) Series

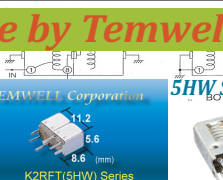
Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price	Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price
K2B1-360M-10M	7HW-35515A-360	11.0	2.5	Online	K2B1-450M-11M	7HW-43525A-450	13.0	2.5	Online
K2B1-370M-10M	7HW-36020A-370	9.0	3.0	Online	K2B1-460M-11M	7HW-45025A-460	13.0	2.5	Online
K2B1-380M-10M	7HW-37020A-380	9.0	2.5	Online	K2B1-475M-11M	7HW-46025A-475	12.0	2.5	Online
K2B1-390M-10M	7HW-38025A-390	10.0	3.0	Online	K2B1-490M-13M	7HW-47530A-490	16.0	2.5	Online
K2B1-410M-10M	7HW-39525A-410	12.0	2.5	Online	K2B1-505M-13M	7HW-49030A-505	14.0	2.5	Online
K2B1-420M-11M	7HW-40525A-420	12.0	2.5	Online	K2B1-525M-13M	7HW-51030A-525	13.0	2.5	Online
K2B1-435M-11M	7HW-42025A-435	12.0	2.5	Online					



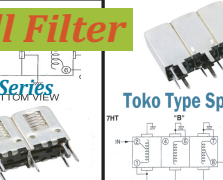
K3RFT(5HT) Series



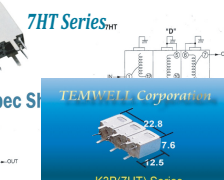
5HT Series



K2RFT(5HW) Series



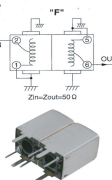
5HW Series



Toko Type Spec Sheet



K3B(7HT) Series



K2B(7HW) Series

Replaceable by Temwell Filter

Temwell Type K2B Series ----- Toko type 252MXPR / 252HXP (Double Tuned) Series

Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price	Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price
K2B-223M-4M	252HEP-A123A	4.0	5.5	Online	K2B-462M-20M	252MXPR-2689A	20.0	2.0	Online
K2B-319.5M-11M	252HEP-2609A	11.0	4.5	Online	K2B-480M-20M	252MXPR-2765A	20.0	2.0	Online
K2B-332M-8M	252HEP-2956A	8.0	3.5	Online	K2C-600M-15M	252HXP-2733F	15.0	3.0	Online
K2B1-337M-8M	252HEP-A041A	8.0	3.5	Online	K2C-640M-15M	252HXP-2708F	15.0	3.0	Online
K2B-380M-21M	252MXPR-2252A	21.0	3.5	Online	K2C-680M-18M	252HXP-2701F	18.0	3.0	Online
K2B-415M-30M	252MXPR-2443A	30.0	5.0	Online	K2C-785M-20M	252HXP-2787F	20.0	2.5	Online
K2B1-405M-15M	252MXPR-2535A	15.0	3.5	Online	K2C-870M-25M	252HXP-2770F	25.0	2.5	Online
K2B1-420M-11M	252MXPR-2536A	11.0	3.5	Online	K2B-453M-20M	252MXPR-2767A	20.0	2.0	Online
K2B1-435M-11M	252MXPR-2537A	11.0	3.5	Online	K2C-910M-20M	252HXP-2737F	20.0	3.0	Online

Temwell Type K2RB/K2RC Series ----- Toko 5HW(Double Tuned) Series (320~1305 MHz)

Temwell Part Number	Replaced Toko Part	-3 BW (MHz)	IL(dB)	Price	Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price
K2RB-340M-10M	5HW-35045A-365	10.0	3.0	Online	K2RB-670M-20M	5HW-65535A-670	20.0	3.5	Online
K2RB-365M-10M	5HW-35045A-365	10.0	3.5	Online	K2RB-700M-20M	5HW-68050A-700	20.0	3.0	Online
K2RB-380M-10M	5HW-38020A-380	10.0	3.5	Online	K2RB-735M-20M	5HW-73050A-735	20.0	3.0	Online
K2RB-415M-10M	5HW-39545A-415	10.0	3.5	Online	K2RB-820M-20M	5HW-82560A-820	20.0	3.0	Online
K2RB-425M-10M	5HW-39545A-425	10.0	3.5	Online	K2RB-862M-21M	5HW-82560A-880	21.0	3.5	Online
K2RB-430M-10M	5HW-40545A-430	10.0	3.5	Online	K2RB-880M-20M	5HW-82560A-880	20.0	3.5	Online
K2RB-450M-11M	5HW-40545A-450	11.0	3.5	Online	K2RB-914M-25M	5HW-94555A-914	25.0	3.5	Online
K2RB-474M-11M	5HW-44545A-474	11.0	3.5	Online	K2RB-959M-25M	5HW-94555A-959	25.0	3.5	Online
K2RB-475M-11M	5HW-44545A-475	11.0	3.5	Online	K2RB-1010M-26M	5HW-100090A-1010	26.0	3.5	Online
K2RB-505M-14M	5HW-47535A-505	14.0	3.5	Online	K2RB-1130M-26M	5HW-109060A-1130	26.0	3.5	Online
K2RB-530M-14M	5HW-51035A-530	14.0	3.5	Online	K2RC-1195M-35M	5HW-115045F-1195	35.0	3.5	Online
K2RB-545M-14M	5HW-52535A-545	14.0	3.5	Online	K2RC-1225M-35M	5HW-120050F-1225	35.0	3.5	Online
K2RB-625M-14M	5HW-58080A-625	14.0	3.5	Online	K2RC-1305M-35M	5HW-125055F-1305	35.0	3.5	Online

Temwell Type K3RFT/ K3BT/K3CT Series ----- Toko type 5HT (Double Tuned) Series (320~12340 MHz)

Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price	Temwell Part Number	Replaced Toko Part	-3BW (MHz)	IL(dB)	Price
K3RFT-320M-20M	5HT-51820AS-518	20.0	3.5	Online	K3RFT-518M-40M	5HT-51820AS-518	40.0	4.0	Online
K3RFT-340M-20M	5HT-52070AS-520	20.0	3.5	Online	K3RBT-520M-14M	5HT-52070AS-520	14.0	4.0	Online
K3RFT-360M-20M	5HT-59065F-590	20.0	4.0	Online	K3RBT-590M-18M	5HT-59065F-590	18.0	4.0	Online
K3RFT-370M-20M	5HT-63540F-635	20.0	4.0	Online	K3RBT-635M-18M	5HT-63540F-635	14.0	4.0	Online
K3RFT-380M-20M	5HT-65550F-655	20.0	4.0	Online	K3RBT-655M-16M	5HT-65550F-655	16.0	4.0	Online
K3RFT-390M-20M	5HT-70530F-705	20.0	4.0	Online	K3RBT-705M-20M	5HT-70530F-705	20.0	4.0	Online
K3RFT-400M-15M	5HT-73565F-735	15.0	4.0	Online	K3RBT-735M-20M	5HT-73565F-735	20.0	4.0	Online
K3RFT-410M-16M	5HT-80030F-800	16.0	4.0	Online	K3RBT-800M-20M	5HT-80030F-800	20.0	4.0	Online
K3RFT-410.7M-10M	5HT-83050F-830	10.0	4.5	Online	K3RBT-830M-20M	5HT-83050F-830	20.0	4.0	Online
K3RFT-420M-16M	5HT-86220F-862	16.0	4.0	Online	K3RBT-862M-20M	5HT-86220F-862	20.0	4.0	Online
K3RFT-430M-18M	5HT-88065F-880	18.0	4.0	Online	K3RBT-880M-20M	5HT-88065F-880	20.0	4.0	Online
K3RFT-435M-10M	5HT-94535F-945	10.0	4.5	Online	K3RBT-945M-20M	5HT-94535F-945	20.0	4.0	Online
K3RFT-440M-18M	5HT-98030F-980	18.0	4.0	Online	K3RBT-980M-20M	5HT-98030F-980	20.0	4.0	Online
K3RFT-450M-18M	5HT-101045F-1010	18.0	4.0	Online	K3RBT-1010M-20M	5HT-101045F-1010	20.0	4.0	Online
K3RFT-460M-18M	5HT-105535F-1055	18.0	4.0	Online	K3RBT-1055M-20M	5HT-105535F-1055	20.0	4.0	Online
K3RFT-480M-18M	5HT-109065F-1090	18.0	4.0	Online	K3RBT-1090M-20M	5HT-109065F-1090	20.0	4.0	Online
K3RFT-495M-20M	5HT-112570C-1125	20.0	4.0	Online	K3RBT-1125M-20M	5HT-112570C-1125	20.0	4.5	Online
K3RFT-515M-20M	5HT-123080C-1230	20.0	4.0	Online	K3RBT-1230M-20M	5HT-123080C-1230	20.0	5.0	Online

9G microwave Band Pass Filter

- > Connector and Needle (for SMD) package option
- > Apps: Marine Navigation
- > Custom design can be discussed



Center Frequency	9.75 GHz
Pass Band Bandwidth	8~11.5GHz@1dB 7.8~11.7GHz@3dB
Insertion Loss	≤ 3.0dB
Ripple in BW	≤ 1.0dB
Rejection	≥60dB@12.3~15.8GHz ≥40dB@7.2GHz ≥60dB@4~4.6GHz
Group Delay	5 Max nsec
Operating Temperature	-40~+85°C
Connectors	SMA



Connector



Niddle (without connector)

TETRA Duplexer (SMD & Connector package)

- > High Accuracy, Competitive Price
- > Apps: Public Safety / Trunked system, Repeater, TETRA / Mobile Station
- > Custom design can be discussed



Connector	Rx	Tx
Center Frequency	382.5 MHz	392.5 MHz
Pass Band Freq.	380~385 MHz	390~395 MHz
Attenuation	≥ 60dB@390-395M	≥ 60dB@380-385M
Power	50 Watt CW	
In/Out Impedance	50 Ω	
Connectors	SMA-Female	



63x59x15mm

Surface Mounted	Rx	Tx
Center Frequency	382.5 MHz	392.5 MHz
Bandwidth	Fo±2.5 (380-385M)	Fo±2.5 (390-395M)
Attenuation	60dB@390-395M	60dB@380-385M
Power	10 Watt	
In/Out Impedance	50 Ω	

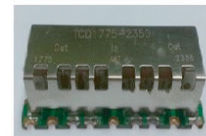


42x23x9.5mm

SMD MULTIPLEXER



- ※ 5 band frequency is available.
- ※ Multiplexer application: Microwave Telecommunication, Radar, Aviation, Navigation, Mining, Electronics counterwork, and etc.
- ※ There are two type of multiplexer: SMD and Connector.



Electronical SPECIFICATION (SMD TYPE)						
ITEM	CH 1	CH 2	CH 3	CH 4	CH 5	UNIT
1 Center Frequency(Fo)	742.5	872.5	1962.5	2132.5	2593.0	MHz
2 Bandwidth(BW)	728.0-757.0	851.0-894.0	1930.0-1995.0	2110.0-2155.0	2495.0-2690.0	MHz
3 Insertion Loss in BW	3.0					dB Max
4 Ripple in BW	F Female (BOTH SIDES)					dB Max
5 VSWR in BW	70mm x 52mm x 18mm					dB Max
6 Attenuation (absolute Value)	30 @ 851-894M 30 @ 1930-1995M 30 @ 2110-2155M	30 @ 728-757M 30 @ 1930-1995M 30 @ 2110-2155M	30 @ 728-757M 30 @ 851-894M 30 @ 2110-2155M	30 @ 728-757M 30 @ 851-894M 30 @ 1930-1995M	30 @ 2110-2155M	dB Min
7 Input Power	3.0					W Max
8 In/Out Impedance	50					ohm
9 Operation Temperature	-40 to 85					C
10 Dimension	123 x 38 x 10.5					mm

FM / UMTS / GSM Band-Pass & Band-Stop Filter



- ✓ Application: Civil and Military RF network system
- ✓ Parameters can adjust by request



Band-Pass	FMA Band	UMTS Band	GSM Band
Pass Band	88-108MHz	1920-2170MHz	880-960MHz
Insertion Loss	2.2dB	2.0dB	2.0dB
Rejection	>30dB @20M-78M >30dB @115M-3000M	>40dB @20M-1820M >40dB @2270M-3000M	>30dB @20M-845M >30dB @995M-3000M
Band-Stop	FMA Band	UMTS Band	GSM Band
Stop Band	88-108MHz	1920-2170MHz	880-960MHz
Stop Band Loss	>30dB	>25dB	>30dB
Pass Band Loss	<2dB @20M-78M <2dB @115M-1800M	<2dB @20M-1820M <2dB @2270M-3000M	<2dB @20M-845M <2dB @995M-2000M
Power	>1Watt		
Impedance	50 ohm		
Connector	Input/Output: SMA-Female		

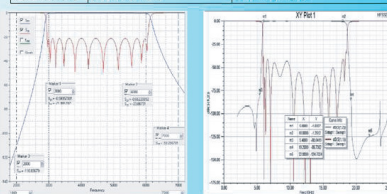
3~6GHz & 6~18GHz Miniature BandPass Filters for Equalizer



- ✓ Support Equalizer, freq. dependent processing of audio signals
- ✓ Support Comm & Telecom Apps
- ✓ High Attenuation value, Low IL
- ✓ 50 ohms, Power ≤ 5Watt
- ✓ Specs are subject to final confirmation



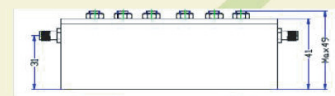
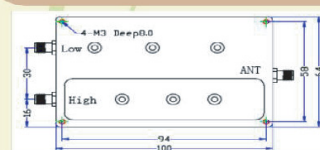
Frequency	4.5GHz	12GHz
Pass Band Frequency	3.0~6.0GHz	6.0~18.0GHz
IL	≤1.0dB	≤2.5dB
VSWR	≤1.6:1	≤1.8:1 (Type≤1.6:1)
Stop Band	≥45dB@DC~2.0GHz	≥60dB@DC~5.4GHz
Atten	≥45dB@7.0~8.0GHz	≥60dB@19.2~22.0GHz
Surface Finish	Original Silver Color	Guide Oxygen Black Paint
Connectors	SMA-Female	SMA-Female



3G 4G Crossband Cavity Diplexer 800-960 MHz & 1710-2170 MHz

Freq Range	800-960 MHz	1710-2170 MHz
Frequency	880 MHz	1940 MHz
Insertion Loss	≤0.5dB	≤0.5dB
Rejection	≥30dB @1710-2170M	≥30dB @800-960M
Return Loss	≥17dB	≥17dB
Ripple	≤0.3dB	≤0.3dB
Power	10W	10W
Connectors	SMA-Female	SMA-Female
Surface Finish	Black Coating or Original Silver Color	

- ✓ Application: GSM, LTE, WCDMA, DCS repeater, receiver, transmitter
- ✓ Low loss, Good Rejection
- ✓ 10W power, SMA-female
- ✓ Miniature case: 100 x 64 x 49 mm
- ✓ Outdoor IP waterproof is available
- ✓ SMD Filter & Duplexer are available



TOKO replace Molded & SMD Coils



- Molded series: S18(10x16mm), MC120, MC152, MC137, MC141
- SMD series: 5CCE, 5CCD (614), FSDV (836), 5CCB, 5CCF
- Application: Marine communication, Satellite phone, Airborne Transceiver



Repl for Toko S18	301SS/N-0500	301SS/N-0600	301SS/N-0800
Center Freq.	100MHz	100MHz	100MHz
Q (Min)	140	130	170
Turns	5.5ts	6.5ts	8.5ts
Repl for Toko	E526HNA-100078	E543SNAS-01009	E558ANA-100052
Center Freq.	50MHz	100MHz	100MHz
Q (Min)	100	50	40

Surface Mounting



Repl for Toko	A638AN-0158Z	S639BN-A353HM	614AN-9561Z
Test Freq.	25.2MHz	7.96MHz	0.796MHz
Q (Min)	40	22	45
Inductance	330nH	-----	560uH

WideBand Receiver System Filters

- > Telecom & Physics laboratories markets
- > Filters other Frequencies and Bandwidth can be customized

Low Pass Filter
3dB cut off Freq 6000MHz
60dB stop band attenuation
Low Insertion loss
Power <15Watts

Low Pass Filter
Center Freq: DC-819.2MHz
60dB stop band attenuation
Low Insertion loss
Power 1Watts max.

Reference: Wideband multichannel & multifunction Receiver



Comb Band Pass Filter
Center Freq: 7987.2MHz
3dB Bandwidth: 700MHz
70dB stop band rejection
Low Insertion loss
Power <2Watts

Cavity Band Pass Filter
Center Freq: 7168MHz
3dB Bandwidth: 102.4MHz
75dB stop band rejection
Low Insertion loss
Power <2Watts

LC Band Pass Filter
Center Freq: 819.2MHz
3dB Bandwidth: 409.6MHz
70dB stop band rejection
Low Insertion loss
Power <1Watts



SMD Bandpass Filter/ Bandstop Filter

Cavity BandPass Filter



- Custom design can be discussed
- Connector, Surface finish are variable
- Apps: Transport, Telecom, Defense, Satellite

S-Band 2800MHz

Ka-Band 26GHz

Freq Range	2700-2900 MHz	Center Freq	26.005 GHz
Center Freq (Fo)	2800 MHz	BW (3dB)	1 GHz
Insertion Loss	≤0.3dB	Insertion Loss	2.0dB Max
Rejection	≥ 40dBc @DC-2500M ≥ 40dBc @3100-6000M	Rejection	30dBc @Fc +/- 610MHz
VSWR	≤1.5	Return Loss	12dB
Power Handling	0.1 Watt	Connector	K-Female (50 Ω)
Impedance	50 ohm	Material	Silver plated aluminum
Connector	SMA-Male	Finishing	Gray paint
Dimension	101x76x38 mm	Dimension	120x18x10 mm

LTE800 GSM900 Low PIM Diplexer



Features:

- Combine/Split LTE 800 & GSM 900 RX/TX signal
- Custom Design available
- Indoor & Outdoor (IP waterproof) option



	RX	TX
Frequency Range	790-862 MHz	880-960 MHz
Insertion Loss	≤1.0 dB	≤1.0 dB
Ripple	≤0.8 dB	≤0.8 dB
Return Loss	>1 / dBi	>1 / dBi
Rejection	≥35 dB@880-960 MHz	≥35 dB@790-862 MHz
IM3	≤ 150dBc@2*43dbm	
Power Input	< 700 W	
Impedance	50Ω	
Connectors	N-Female	
Surface Finish	Black Paint	
Operate Temperature	-40 to +65°C	
Dimension	144 x 100 x 55 mm (±0.5mm)	

Cavity DECT Notch Filter

- Solved system work conflict between PCS & EU DECT band
- High Accuracy, Competitive Price
- Apps: Telecommunication, Mobile, Repeater
- Band-pass, Ceramic design can discuss



Stop Band Freq.	1880-1990 MHz
Stop Band Attenuation	≥ 60dB
Pass Band Freq.	DC-1810 & 2060-5000 MHz
Pass Band Insertion Loss	≤ 1.0dB
Pass Band VSWR	≤ 1.5:1
Power Handling	≤ 10 Watt
In/Out Impedance	50 Ω
Connectors	SMA-Female



SMD Mobile LTE Reject Filter



- Protect TV Viewer against interference by Mobile / Cellular device
- Demo: Australia TV Channel Frequency Band, cut off at 696MHz
- Apps: TV & Broadcast operator (Tower, control management)



Reject Freq.	696 MHz
Reject Bandwidth	4 MHz
Attenuation	35dB
Pass Band	Low Band: DC-672 MHz High Band: 715-1500 MHz
Insertion Loss	1.0dB
Input Power	3 Watt
In/Out Impedance	50 Ω
Temperature	-40°C to +85°C
Dimension	34x19x7.5 mm

Alternative Murata SMD Bandpass Filter

Temwell 7H/5W Series replaced for Murata DFCH Series 800/900MHz

Application	Temwell Part Number	Replaced Murata P/N	Fo (MHz)	-3BW (MHz)	IL(dB)	Attenuation (dB min.)	Operation Temperature (C)	Dimension (mm)
LMR	TT67168B-815M	DFCH3815MHDJAA	815	20	2.8	36 (Fo+/-80MHz)	-35 to +85	22.8x7.6x12.5
LMR	TTW3514B-815M	DFCH3815MHDJAA	815	20	2.8	36 (Fo+/-80MHz)	-35 to +85	16.8x5.6x8.6
AMPS	TT67450E-836.5M	DFCH3836MHDJAA	836.5	25	2.6	12 (Fo+/-32.5MHz)	-35 to +85	22.8x7.6x12.5
AMPS	TTW3513B-836.5M	DFCH3836MHDJAA	836.5	25	2.6	12 (Fo+/-32.5MHz)	-35 to +85	16.8x5.6x8.6
LMR	TT63449B-860M	DFCH3860MHDJAA	860	20	2.8	36 (Fo+/-80MHz)	-35 to +85	22.8x7.6x12.5
LMR	TTW3673B-860M	DFCH3860MHDJAA	860	20	2.8	36 (Fo+/-80MHz)	-35 to +85	16.8x5.6x8.6
AMPS	TT67451F-881.5M	DFCH3881MHDJAA	881.5	25	2.6	12 (Fo+/-32.5MHz)	-35 to +85	22.8x7.6x12.5
AMPS	TTW3673B-881.5M	DFCH3881MHDJAA	881.5	25	2.6	12 (Fo+/-32.5MHz)	-35 to +85	16.8x5.6x8.6
EGSM	TT67309A-897.5M	DFCH3897MHDJAA	897.5	35	3.0	6 (Fo+/-27.5MHz)	-35 to +85	22.8x7.6x12.5
EGSM	TTW3549B-897.5M	DFCH3897MHDJAA	897.5	35	3.0	6 (Fo+/-27.5MHz)	-35 to +85	16.8x5.6x8.6
GSM	TT67550E-902.5M	DFCH3902MHDJAA	902.5	25	2.6	12 (Fo+/-32.5MHz)	-35 to +85	22.8x7.6x12.5
GSM	TTW3674B-902.5M	DFCH3902MHDJAA	902.5	25	2.6	12 (Fo+/-32.5MHz)	-35 to +85	16.8x5.6x8.6
EGSM	TT67311A-942.5M	DFCH3942MHDJAA	942.5	35	3.0	6 (Fo+/-27.5MHz)	-35 to +85	22.8x7.6x12.5
EGSM	TTW3565B-942.5M	DFCH3942MHDJAA	942.5	35	3.0	6 (Fo+/-27.5MHz)	-35 to +85	16.8x5.6x8.6
GSM	TT67551F-947.5M	DFCH3947MHDJAA	947.5	25	2.6	12 (Fo+/-32.5MHz)	-35 to +85	22.8x7.6x12.5
GSM	TTW3674B-947.5M	DFCH3947MHDJAA	947.5	25	2.6	12 (Fo+/-32.5MHz)	-35 to +85	16.8x5.6x8.6
EGSM	TT67309A-897.5M	DFCH4897MHDJAA	897.5	35	4.6	13 (Fo+/-27.5MHz)	-35 to +85	22.8x7.6x12.5
EGSM	TTW3549B-897.5M	DFCH4897MHDJAA	897.5	35	4.6	13 (Fo+/-27.5MHz)	-35 to +85	16.8x5.6x8.6
EGSM	TT67311A-942.5M	DFCH4942MHDJAA	942.5	35	4.6	13 (Fo+/-27.5MHz)	-35 to +85	22.8x7.6x12.5
EGSM	TTW3565B-942.5M	DFCH4942MHDJAA	942.5	35	4.6	13 (Fo+/-27.5MHz)	-35 to +85	16.8x5.6x8.6

Temwell 7H/5W Series replaced for Murata DFCB Series 800/900MHz

Application	Temwell Part Number	Replaced Murata P/N	Fo (MHz)	-3BW (MHz)	IL(dB)	Attenuation (dB min.)	Operation Temperature (C)	Dimension (mm)
AMPS	TT67450E-836.5M	DFCB2836MLDJAA	836.5	25	2.6	6.5 (869 to 894MHz)	-35 to +85	22.8x7.6x12.5
AMPS	TTW3513B-836.5M	DFCB2836MLDJAA	836.5	25	2.6	6.5 (869 to 894MHz)	-35 to +85	16.8x5.6x8.6
AMPS	TT67451F-881.5M	DFCB2881MLDJAA	881.5	25	2.6	9 (824 to 849MHz)	-35 to +85	22.8x7.6x12.5
AMPS	TTW3673B-881.5M	DFCB2881MLDJAA	881.5	25	2.6	9 (824 to 849MHz)	-35 to +85	16.8x5.6x8.6
GSM	TT67550E-902.5M	DFCB2902MLDJAA	902.5	25	2.6	27 (Fo-77.5MHz)	-35 to +85	22.8x7.6x12.5
GSM	TTW3674B-902.5M	DFCB2902MLDJAA	902.5	25	2.6	27 (Fo-77.5MHz)	-35 to +85	16.8x5.6x8.6
WLAN915	TT67550E-915M	DFCB2915MLDJAA	915	26	2.5	27 (837.5MHz)	-35 to +85	22.8x7.6x12.5
WLAN915	TTW3684B-915M	DFCB2915MLDJAA	915	26	2.5	27 (837.5MHz)	-35 to +85	16.8x5.6x8.6
GSM	TTW3684B-947.5M	DFCB2947MLDJAA	947.5	25	2.6	27 (Fo-77.5MHz)	-35 to +85	22.8x7.6x12.5
GSM	TTW3570B-947.5M	DFCB2947MLDJAA	947.5	25	2.6	27 (Fo-77.5MHz)	-35 to +85	16.8x5.6x8.6
LMR	TT67555E-815.5M	DFCB3815MLDJAA	815.5	19	2.5	12 (Fo+/-35.5MHz)	-35 to +85	22.8x7.6x12.5
LMR	TTW3514B-815.5M	DFCB3815MLDJAA	815.5	19	2.5	12 (Fo+/-35.5MHz)	-35 to +85	16.8x5.6x8.6
AMPS	TT67450E-836.5M	DFCB3836MLDJAA	836.5	25	3.0	12 (869 to 894MHz)	-35 to +85	22.8x7.6x12.5
AMPS	TTW3513B-836.5M	DFCB3836MLDJAA	836.5	25	3.0	12 (869 to 894MHz)	-35 to +85	16.8x5.6x8.6
LMR	TT63449B-860.5M	DFCB3860MLDJAA	860.5	19	2.5	13 (Fo+35.5MHz)	-35 to +85	22.8x7.6x12.5
LMR	TTW3673B-860.5M	DFCB3860MLDJAA	860.5	19	2.5	13 (Fo+35.5MHz)	-35 to +85	16.8x5.6x8.6
AMPS	TT67451F-881.5M	DFCB3881MLDJAA	881.5	25	3.0	15 (824 to 849MHz)	-35 to +85	22.8x7.6x12.5
AMPS	TTW3673B-881.5M	DFCB3881MLDJAA	881.5	25	3.0	15 (824 to 849MHz)	-35 to +85	16.8x5.6x8.6
GSM	TT67550E-902.5M	DFCB3902MLDJAA	902.5	25	3.0	45 (Fo-77.5MHz)	-35 to +85	22.8x7.6x12.5
GSM	TTW3674B-902.5M	DFCB3902MLDJAA	902.5	25	3.0	45 (Fo-77.5MHz)	-35 to +85	16.8x5.6x8.6
WLAN915	TT67550E-915M	DFCB3915MLDJAA	915	26	3.0	15 (Fo-32.5MHz)	-35 to +85	22.8x7.6x12.5
WLAN915	TTW3684B-915M	DFCB3915MLDJAA	915	26	3.0	15 (Fo-32.5MHz)	-35 to +85	16.8x5.6x8.6
GSM	TT67551F-947.5M	DFCB3947MLDJAA	947.5	25	3.0	45 (Fo-77.5MHz)	-35 to +85	22.8x7.6x12.5
GSM	TTW3684B-947.5M	DFCB3947MLDJAA	947.5	25	3.0	45 (Fo-77.5MHz)	-35 to +85	16.8x5.6x8.6

Alternative Toko Parts Source & Obsolete Parts service

TEMSTRON SUPPLY-RF & Microwave Compoents

Toko SMT Coil Solution



Toko Obsolete Solutions: Variable Inductor & Molded Coils



VHF Helical Filter replace for Toko 13H series

Temwell Triple Filter replace for Toko 271MT series

Attenuation: Fo-/+ 15MHz is 20dB ~ 30 dB approx.

Temwell P/N	Toko P/N	IL	Temwell P/N	Toko P/N	IL
TT67280A1-99M-7M	271MT-1149A	3.0	TT67676B1-138M-9M	271MT-1158A	2.5
TT67280A1-103M-7M	271MT-1150A	2.5	TT67709B-146M-5M	271MT-1159A	2.5
TT67198B1-107.5M-6M	271MT-1151A	2.5	TT67709B-154M-5M	271MT-1160A	2.5
TT67198B1-111M-6M	271MT-1152A	2.5	TT67709B-164M-5M	271MT-1161A	3.0
TT67198B1-115M-6M	271MT-1153A	2.5	TT6786B-171M-6M	271MT-1162A	2.5
TT67198B1-119M-6M	271MT-1154A	2.0	TT6786B-182.5M-6M	271MT-1163A	3.0
TT67198B1-122M-6M	271MT-1155A	2.5	TT6760B-194.5M-7M	271MT-1164A	3.0
TT67676B1-126M-9M	271MT-1156A	2.5	TT6760B-207.5M-7M	271MT-1165A	3.0
TT67676B1-131M-9M	271MT-1157A	2.5	TT6760B-220M-7M	271MT-1166A	3.0

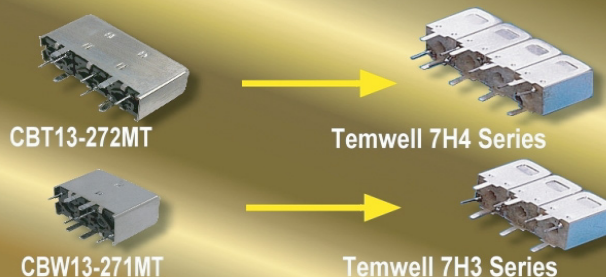
Temwell Quadruple Filter replace for Toko 272MT series

Attenuation: Fo-/+ 10MHz is 20dB ~ 30 dB approx.

Temwell P/N	Toko P/N	IL	Temwell P/N	Toko P/N	IL
TF69280A1-100M-6M	272MT-1173A	4.0	TF6959D-165M-7M	272MT-1118D	3.0
TF69280A1-107M-6M	272MT-1230D	4.5	TF6959D-169M-7M	272MT-1120A	6.0
TF69198B1-110M-6M	272MT-1180A	5.5	TF6959D-171M-7M	272MT-1125D	2.5
TF69198B1-124M-6M	272MT-1177D	3.5	TF6959D-177M-7M	272MT-1126F	3.0
TF69676B1-130M-6M	272MT-1175D	5.5	TF6959D-183M-7M	272MT-1127F	3.0
TF69676B1-133.7M-6M	272MT-1176D	3.5	TF6959D-185M-7M	272MT-1131A	5.0
TF69205B1-134M-8M	272MT-1116A	3.0	TF6959D-189M-7M	272MT-1128F	3.5
TF6955B1-137.5M-6M	272MT-1169D	4.5	TF6959D-194.5M-7M	272MT-1208A	4.5
TF6957B1-140.21M-7M	272MT-1117D	3.0	TF6959D-195M-7M	272MT-1129F	3.0
TF6957B1-143M-7M	272MT-1119D	4.0	TF8929B1-196M-5M	272MT-1182A	5.0
TF6955B1-145M-6M	272MT-1006A	8.0	TF8929B1-200M-5M	272MT-1195A	7.0
TF6955B1-145M-6M	272MT-1008A	8.0	TF8929B1-201M-5M	272MT-1130F	4.0
TF69709B-147M-5M	272MT-1181D	3.5	TF8929B1-215M-5M	272MT-1132A	4.0
TF6914B-156.7M-3M	272MT-1219A	7.0	TF8929B1-220M-5M	272MT-1209A	3.0
TF69709B-157M-5M	272MT-1124D	3.5	TF8929B1-223M-5M	272MT-1146A	5.0
TF69711B-159M-7M	272MT-1174A	3.0	TF8929B1-226.4M-5M	272MT-1188A	6.0
TF6914B-160M-3M	272MT-1123A	6.0	TF6958B-170M-4M	272MT-1013A	8.0
TF6914B-161M-3M	272MT-1221A	4.5	TF6958B-170M-4M	272MT-1007A	9.0
TF6914B-161.3M-3M	272MT-1218A	7.0	TF8929B1-223M-5M	272MT-1080A	6.0
TF6914B-164M-3M	272MT-1148A	8.5	TF69185B-230M-17M	272MT-1413A	2.0

Toko 13H Filter Solution- Temwell 7H3/7H4 Series

-Performance Replaceable-



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