

Garnets

Trans-Tech manufactures ferrimagnetic materials for circulators and isolators used in base stations and mobile telephone designs. Trans-Tech's Garnets are pure single phase ferrimagnetic

resonance line widths and find primary application in non-resonant devices where extremely low absorption loss and broad bandwidth operation of circulators/isolators are desired.

Materials	Saturation Magnetization (Gauss)	Line Width @ -3 dB	Dielectric Constant	Dielectric Loss Tangent	Curie Temperature (°C)
G-100	1000 ± 5%	55 ± 20%	14.7 ± 5%	≤ 0.0002	250
G-113	1780 ± 5%	45 ± 20%	15.0 ± 5%	≤ 0.0002	280
G-1010	1000 ± 5%	40 ± 20%	14.7 ± 5%	≤ 0.0002	210
G-1200	1200 ± 5%	50 ± 20%	15.1 ± 5%	≤ 0.0002	260
TTVG-1000	1000 ± 5%	≤ 10	14.0 ± 5%	≤ 0.0002	199
TTVG-1100	1100 ± 5%	≤ 10	14.1 ± 5%	≤ 0.0002	205
TTVG-1200	1200 ± 5%	≤ 10	14.4 ± 5%	≤ 0.0002	208
TTVG-1400	1400 ± 5%	≤ 10	14.5 ± 5%	≤ 0.0002	215
TTVG-1600	1600 ± 5%	≤ 12	14.6 ± 5%	≤ 0.0002	220

Ceramic Bandpass Filers – 200 MHz to 2.5 GHz

These filters are created by coupling ceramic resonators (poles), and are available in two and three pole, through-hole and surface mount designs. The filter becomes more frequency selective with additional poles, but at the expense of insertion loss. The lowest loss is provided with the two pole design, and increases slightly with each additional pole. Other frequencies are available. Please call Trans-Tech with your requirements.

Excellent repeatability for volume manufacturing is achieved through the fixed-tuned design and Trans-Tech's expertise with high dielectric ceramics. With no moving parts, the filter provides ruggedness, mechanical stability, and reliability. Standard parts have been developed for the following applications to maintain competitive costs and facilitate prompt delivery.

Two Pole Filters

Part Number	Center Frequency	Bandwidth $f_0 \pm$ MHz (BW)	Insertion Loss (dB) in BW	Ripple (dB max) in BW	VSWR in BW max	Attention (at $f_0 \pm$ MHz) min
Cellular/NMT9009/E-AMPS						
TT6P2-0836S-2518	836.5	12.5	1.8	0.8	2.0	20 ($f_0 \pm 77.5$)
TT6P2-0881S-2518	881.5	12.5	1.8	0.8	2.0	20 ($f_0 \pm 77.5$)
TT6P2-0902S-2518	902.5	12.5	1.8	0.8	2.0	20 ($f_0 \pm 77.5$)
TT6P2-0947S-2518	947.5	12.5	1.8	0.8	2.0	20 ($f_0 \pm 77.5$)
TT6P2-0886S-0230	886.0	1.0	3.0	0.5	2.0	35 ($f_0 \pm 71.0$)
TT6P2-0914S-0230	914.5	1.0	3.0	0.5	2.0	35 ($f_0 \pm 71.0$)
TT6P2-0931S-0230	931.0	1.0	3.0	0.5	2.0	35 ($f_0 \pm 71.0$)

Two Pole Filters (Continued)

Part Number	Center Frequency	Bandwidth $f_0 \pm$ MHz (BW)	Insertion Loss (dB) in BW	Ripple (dB max) in BW	VSWR in BW max	Attention (at $f_0 \pm$ MHz) min
Cordless Telephone						
TT4P2-0802F-0820	802.0	4.0	2.0	1.0	2:1	20 ($f_0 \pm 64$)
TT4P2-1227F-1012	1227.0	5.0	1.2	0.5	2:1	20 (@ $f_0 - 140$) 17 (@ $f_0 + 140$)
TT4P2-1575F-1012	1575.0	5.0	1.2	0.5	2:1	20 (A $f_0 - 140$) 17 (@ $f_0 + 140$)
Spread Spectrum						
TT6P2-0915S-2518	915.0	12.5	1.8	0.8	2.0	20 ($f_0 \pm 77.5$)
TT6P2-0922S-1418	922.0	7.0	1.8	0.8	2.0	24 ($f_0 \pm 100.0$)
TT6P2-0926S-1118	926.5	5.5	1.8	0.8	2.0	14 ($f_0 \pm 50.0$)
GPS						
TT6P2-1575S-2020	1575.0	10.0	2.0	1.0	2.0	32 ($f_0 \pm 77.5$)
TT6P2-1575S-2007	1575.0	10.0	0.7	0.5	2.0	20 ($f_0 \pm 140.0$)
TT6P2-1227S-2008	1227.0	10.0	0.8	0.5	2.0	20 ($f_0 \pm 140.0$)

Three Pole Filters

Part Number	Center Frequency	Bandwidth $f_0 \pm$ MHz (BW)	Insertion Loss (dB) in BW	Ripple in BW (dB max)	VSWR in BW max	Attention (at $f_0 \pm$ MHz) min
TT4P3-0881F-2630	881.5	13.0	3.0	1.0	2:1	12 (@ $f_0 \pm 32.5$)
TT4P3-0915F-2630	915.0	13.0	3.0	1.0	2:1	12 (@ $f_0 \pm 32.5$)
TT4P3-1575F-0220	1575.4	1.0	2.0	1.0	1.43:1	18 (@ $f_0 \pm 50$)
TT4P3-1910F-12010	1910.0	60.0	1.0	0.5	2:1	15 (@ $f_0 \pm 210$)
Cellular/NMT900/UK-TACS						
TT6P3-0836S-2520	836.5	12.5	2.0	0.8	2.0	12 ($f_0 \pm 32.5$)
TT6P3-0881S-2520	881.5	12.5	2.0	0.8	2.0	12 ($f_0 \pm 32.5$)
TT6P3-0902S-2520	902.5	12.5	2.0	0.8	2.0	12 ($f_0 \pm 32.5$)
TT6P3-0947S-2520	947.5	12.5	2.0	0.8	2.0	12 ($f_0 \pm 32.5$)
Cordless Telephone						
TT6P3-0886S-0240	886.0	1.0	4.0	0.5	2.0	50 (931)
TT6P3-0914S-0240	914.5	1.0	4.0	0.5	2.0	50 (959)
TT6P3-0931S-0225	931.0	1.0	2.5	0.5	2.0	50 (832)
Spread Spectrum						
TT6P3-0915S-2520	915.0	12.5	2.0	0.8	2.0	12 ($F_0 \pm 32.5$)
TT6P3-0915S-1425	915.0	7.0	2.5	1.0	2.0	27 ($F_0 \pm 35.0$)
PCMCIA						
TT2P3-2450F-10020	2450	50.0	2.0	1.0	2:1	7 (@ $f_0 - 100.0$) 5 (@ $f_0 + 100.0$) 32 (@ $f_0 - 250.0$) 22 (@ $f_0 + 250.0$)