

2013 RF & MICROWAVE

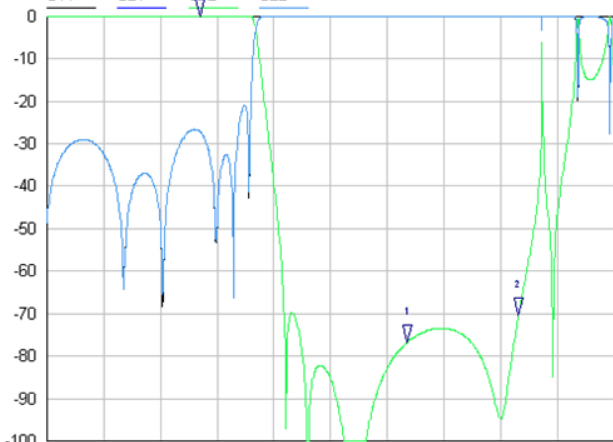
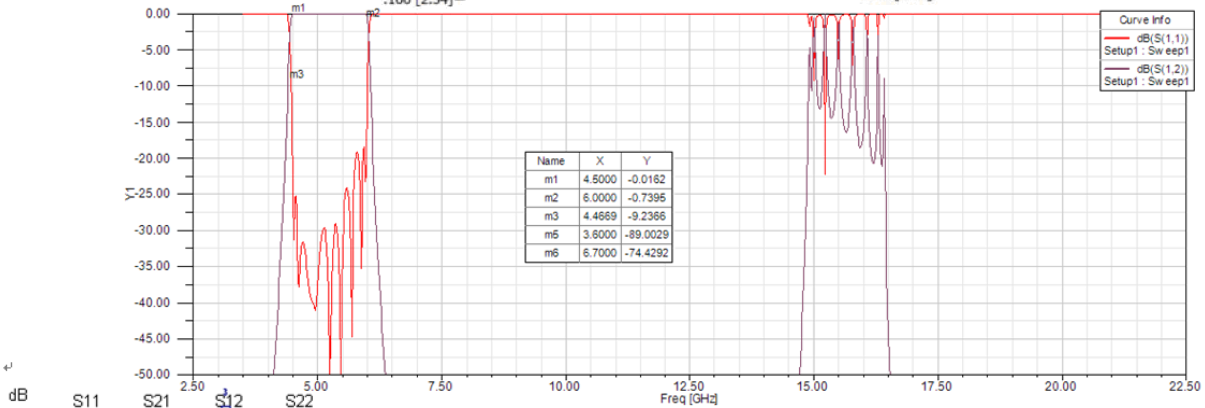
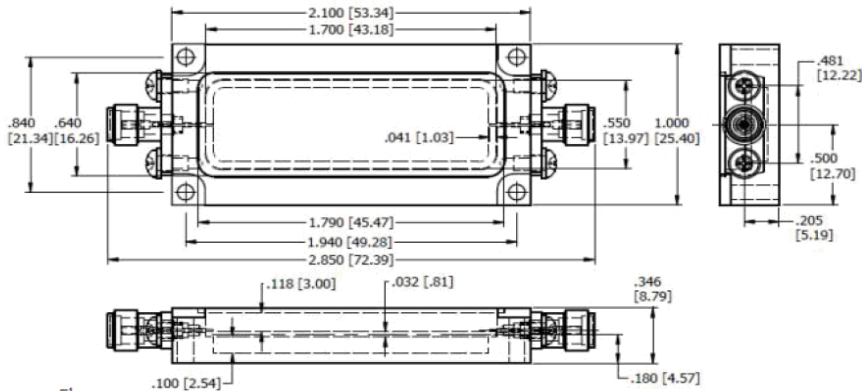
RF Solutions
Spring edition

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Broadband Bandpass Filter



Pass Band Frequency Range	4.5~6.0GHz
Pass Band Insertion Loss	≤ 1.0 (dB)
Stop Band Frequency Range	DC~3.6GHz, 6.7~15GHz
Stop Band Loss	≥ 70 (dB)
VSWR	≤ 1.4
Package Type	SMA female*2
Impedance	$50 \pm 1\Omega$ @ I/O
Size, connector	Figure 1
Mounting Holes	Figure 1
Power Handling	1W
Operating Temperatures	-55~+85°C
Flatness	less than +/- 1 dB

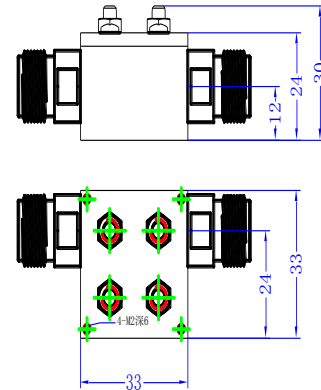


Mkr	Trace	X-Axis	Value
1	S21	14.0000 GHz	-76.80 dB
2	S21	18.3000 GHz	-70.40 dB
3	S21	6.0000 GHz	-0.02 dB

WLAN & Wi-Fi 4.9G & 5.8G Indoors & Outdoors Bandpass Filters

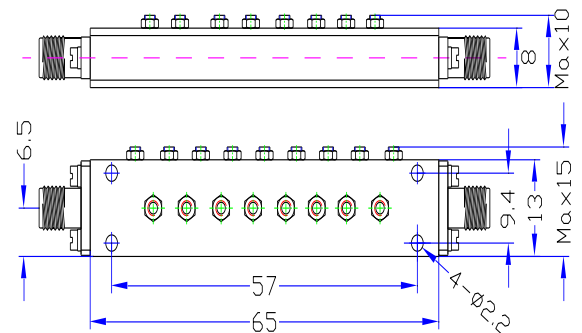


Center Frequency	4965MHz	5800MHz
Bandwidth	50MHz	150MHz
Insertion Loss	≤1.0dB	≤0.5dB
Ripple	≤1.0dB	≤1.0dB
Return Loss	≥10dB	≥10dB
Power	50W	50W
Impedance	50Ω	50Ω
Rejection	≥6dB@4890MHz ≥6dB@5040MHz	≥6dB@5570MHz ≥6dB@6030MHz
Operating Temperature	➤ -40°C ~ +85°C	➤ -40°C ~ +85°C
Surface Finish	➤ Black Paint	➤ Black Paint
Port Connectors	N-Female	N-Female
Waterproof ability	IP 65	IP65
Configuration	As Below (Tolerance±0.2)	As Below (Tolerance±0.2)



❖ Comb Filters

Model	TA0345-S09
1dB Pass Band Frequency	15.8~17.4GHz (F0=16.6GHz)
Insertion Loss @ Center Frequency	≤1.0dB @ 16.6GHz
VSWR	≤1.7:1
Rejection	≥80dB @ 14GHz ≥50dB @ 20GHz
Port Connectors	SMA-Female
Operating Temperature	-40°C ~ +80°C
Surface Finish	The Original Silver Colour
Configuration	As Below (Size Unit: mm)



Suspended Substrate Stripline Filters



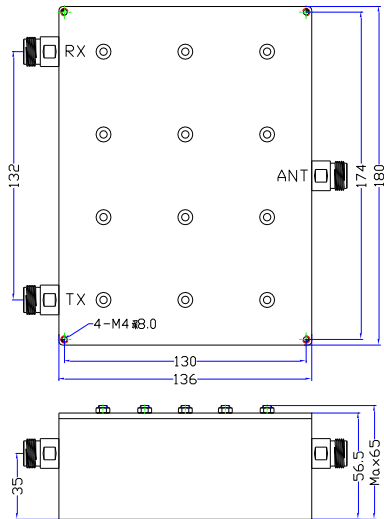
High Pass Filter Series

Model	3dB Cut off(GHz)	1dB Pass Band(GHz)	Insertion Loss(dB)	VSWR	Stop Band Rejection (dB@GHz)	Power Handling(W)	Connectors	Size LxWxH(mm)
TA0138-HS	1	1.1 ~ 4	≤1.0	≤2.0	≥45@DC ~ 0.85 (Type50)	15	SMA-F	71x40x10
TA0139-HS	2	2.2 ~ 12	≤1.0	≤2.0	≥45@DC ~ 1.7 (Type50)	15	SMA-F	38x34x10
TA0140-HS	3	3.3 ~ 12	≤1.0	≤2.0	≥45@DC ~ 2.55 (Type50)	15	SMA-F	35x31x10
TA0141-HS	4	4.4 ~ 12	≤1.0	≤2.0	≥45@DC ~ 3.4 (Type50)	15	SMA-F	34x25x10
TS-A0107-HS	5	5.5 ~ 16	≤1.0	≤2.0	≥45@DC ~ 4.25 (Type50)	15	SMA-F	26x25x10
TA0072-HS	6	6.6 ~ 18	≤1.0	≤2.0	≥45@DC ~ 5.1 (Type50)	15	SMA-F	29x28x10
TA0142-HS	7	7.7 ~ 18	≤1.0	≤2.0	≥45@DC ~ 5.95 (Type50)	15	SMA-F	29x23x10
TA0143-HS	8	8.8 ~ 18	≤1.0	≤2.0	≥45@DC ~ 6.8 (Type50)	15	SMA-F	23x25x10
TA0144-HS	9	9.9 ~ 18	≤1.0	≤2.0	≥45@DC ~ 7.65 (Type50)	15	SMA-F	25x24x10
TA0145-HS	10	11 ~ 18	≤1.0	≤2.0	≥45@DC ~ 8.5 (Type50)	15	SMA-F	25x23x10
TA0146-HS	11	12.1 ~ 18	≤1.0	≤2.0	≥45@DC ~ 9.35 (Type50)	15	SMA-F	24x22x10
TA0147-HS	12	13.2 ~ 18	≤1.0	≤2.0	≥45@DC ~ 10.2 (Type50)	15	SMA-F	24x21x10
TA0034-HS	----	2 ~ 18	≤1.0	≤2.0	≥50@DC ~ 1.5 (Type60)	15	SMA-F	44x17x10
TA0223-HS	----	3 ~ 18	≤1.0	≤2.0	≥65@DC ~ 2 (Type70)	15	SMA-F	31x17x10
TA0225-HS	----	4 ~ 18	≤1.0	≤2.0	≥40@DC ~ 3 (Type45)	15	SMA-F	28x17x10
TA0074-HS	----	1.5 ~ 13	≤1.0	≤2.0	≥50@DC ~ 1 (Type65)	15	SMA-F	53x20x10
TA0233-HS	----	4 ~ 18	≤1.0	≤2.0	≥40@DC ~ 2.5	15	SMA-F	22x17x10

Low Pass Filter Series

Model	3dB Cut off(GHz)	1dB Pass Band(GHz)	Insertion Loss(dB)	VSWR	Stop Band Rejection (dB@GHz)	Power Handling(W)	Connectors	Size LxWxH(mm)
TA0148-LS	1	DC ~ 0.9	≤1.0	≤2.0	≥45@1.2 ~ 4 (Type50)	15	SMA-F	120x41x10
TA0098-LS	2	DC ~ 1.8	≤1.0	≤2.0	≥45@2.3 ~ 6 (Type50)	15	SMA-F	53x36x10
TA0106-LS	3	DC ~ 2.7	≤1.0	≤2.0	≥45@3.45 ~ 8 (Type50)	15	SMA-F	41x34x10
TA0149-LS	4	DC ~ 3.6	≤1.0	≤2.0	≥45@4.6 ~ 10 (Type50)	15	SMA-F	39x27x10
TA0150-LS	5	DC ~ 4.5	≤1.0	≤2.0	≥45@5.8 ~ 12 (Type50)	15	SMA-F	35x24x10
TA0137-LS	6	DC ~ 5.4	≤1.0	≤2.0	≥45@6.9 ~ 14 (Type50)	15	SMA-F	35x22x10
TA0151-LS	7	DC ~ 6.3	≤1.0	≤2.0	≥45@8 ~ 15 (Type50)	15	SMA-F	33x22x10
TA0152-LS	8	DC ~ 7.2	≤1.0	≤2.0	≥45@9.2 ~ 16 (Type50)	15	SMA-F	33x21x10
TA0079-LS	9	DC ~ 8.1	≤1.0	≤2.0	≥45@10.4 ~ 16.5 (Type50)	15	SMA-F	25x19x10
TA0153-LS	10	DC ~ 9	≤1.0	≤2.0	≥45@11.5 ~ 17 (Type50)	15	SMA-F	24x18.5x10
TA0154-LS	11	DC ~ 9.9	≤1.0	≤2.0	≥45@12.5 ~ 17.5 (Type50)	15	SMA-F	23x18.5x10
TA0155-LS	12	DC ~ 10.8	≤1.0	≤2.0	≥45@13.8 ~ 18 (Type50)	15	SMA-F	20x18x10
TA0229-LS	13	DC ~ 11.7	≤1.0	≤2.0	≥45@15 ~ 19 (Type50)	15	SMA-F	20x17.5x10
TA0224-LS	14	DC ~ 12.6	≤1.0	≤2.0	≥45@16.1 ~ 20 (Type50)	15	SMA-F	19x17.5x10
TA0173-LS	----	DC ~ 2	≤1.0	≤2.0	≥50@2.5 ~ 13 (Type55)	15	SMA-F	83x35x10
TA0071-LS	----	DC ~ 2.75	≤1.6	≤1.7	≥40@3 ~ 8.5 (Type45)	15	SMA-F	59x39x10

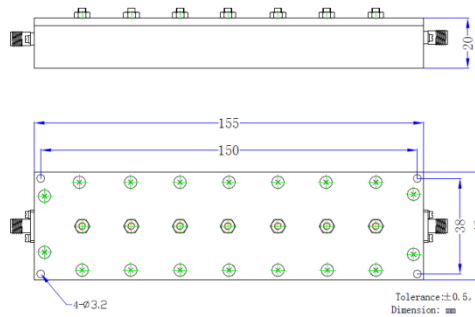
Cavity Duplexers



Serial	Parameters	RX	TX
1	Frequency Range	409~415MHz	418~423MHz
2	Insertion Loss	≤2.0dB	≤2.0dB
3	VSWR	≤1.3:1	≤1.3:1
4	Rejection)	≥50dB@418~423MHz	≥50dB@409~415MHz
5	Surface Finish	Black Paint	
6	Connectors	N-Female	
7	Port Sign	Port1:ANT ; Port2:RX ; Port3:TX	
8	Configuration	As Below	

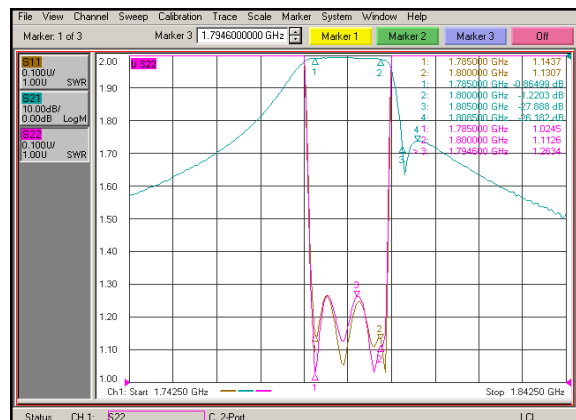
Serial	Parameters	RX	TX
1	Frequency Range	404.0625MHz	414.0625MHz
2	Center Frequency	401.0625~407.0625MHz	411.5625~416.5625MHz
3	Insertion Loss	≤2.0dB	≤2.0dB
4	VSWR	≤1.3:1	≤1.3:1
5	Rejection	≥50dB@ 411.5625~416.5625MHz	≥50dB@ 401.0625~407.0625MHz
6	Surface Finish	Black Paint	
7	Connectors	N-Female	
8	Port Sign	Port1:ANT ; Port2:RX ; Port3:TX	
9	Configuration	As Below (Size Unit: mm)	

Center Frequency	6004.5 MHz
Bandwidth	40 MHz
Insertion Loss	≤1.5dB
Return Loss	≥15dB
Rejection	≥35dB@90MHz from Center frequency
Port Connectors	SMA-Female
Configuration	As Below



Notch Filters

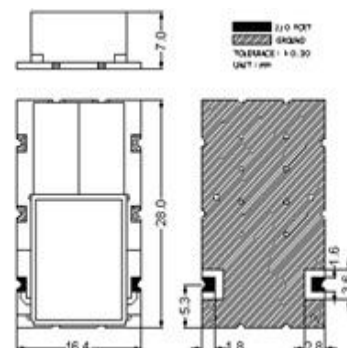
Center Frequency	1785~1800 MHz
Insertion Loss	≤1.8dB
VSRW	≤1.5
Rejection	1805~1800 Mhz ≥ 25dB
Impedance	50Ω
Connectors	SMA-Female
Configuration	63 x 63 x33 mm



Digital Broadcasting

Band Stop Filters – DR & Lumped

1	Center Frequency [fo]	5~787MHz
2	Insertion Loss @ fo	3.5 dB max.
3	Ripple in BW	3.5 dB max.@670MHz ~787MHz
		2.5 dB max.@5MHz ~460MHz
4	Return Loss in BW	10dB min@5~320MHz
		5dB min@321~660MHz
		10dB min@661~787MHz
5	Attenuation [Absolute Value]	8 dB min @ 791MHz
		17 dB min @ 793MHz
		20 dB min @ 794~862MHz
6	In/Out Impedance	75Ω
7	Input Power	3 W max.
8	Operation Temp Range	-40 C to +85 C



1	Impedance	75 ohm
2	Pass Band	5-790 MHz
3	Pass Band Insertion Loss	3.0dB (typ) / 5.0dB (max)
4	Stop Band	799MHz-862MHz
5	Stop Band Rejection	30dB (min)
6	Dimensions (incl. M/F connectors)	21(ϕ) x 57(L) mm
7	Net Weight	48g

1	Impedance	75 ohm
2	Pass Band	5-790 MHz
3	Pass Band Insertion Loss	5-710MHz 1.0dB (typ) / 2.0dB (max)
		710-790MHz 1.5dB (typ) / 8.5dB (max)
4	Stop Band Rejection	800MHz 22dB (min)
		810MHz 40dB (min)
		821-860MHz 60dB (min)
5	Dimensions (incl. M/F connectors)	21(ϕ) x 57(L) mm
6	Net Weight	48g

1	Impedance	75 ohm
2	Pass Band	5-770 MHz
3	Pass Band Insertion Loss	1.5dB (typ) / 5.5dB (max)
4	Stop Band	822MHz-862MHz
5	Stop Band Rejection	50dB (min)
6	Dimensions (incl. M/F connectors)	21(ϕ) x 57(L) mm
7	Net Weight	48g

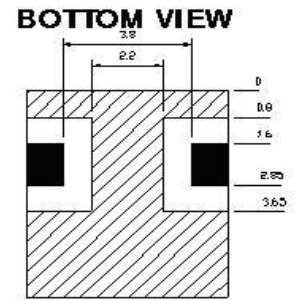
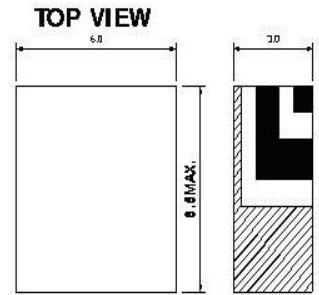


Features:

- ✓ Center Freq. Range: 800MHz – 6000MHz
- ✓ 2 Pole – 5 Pole
- ✓ TOKO & Murata Compatible
- ✓ Application: Cellular, GPS, Cordless Phone, MCA, Satellite, Spread Spectrum, CATV, TCAS, WLAN, Inmarsat, Antenna Duplexer, DR Resonator and etc.



Toko No.	TDFM3A-1590J-10A	4DFA-1227D-12
Temstron Across No.	TDF32C1590S50B	TDF32C1227S10B
Frequency	1590.0 MHz	1227.0 MHz
Band Width	$f_o \pm 25\text{MHz}$ [1565MHz~1615MHz]	$f_o \pm 5\text{MHz}$ [1222MHz~ 1232MHz]
Insertion Loss	2.0 dB (Max.)	1.5 dB (Max.)
VSWR	2.0 : 1 (Max.)	2.0 : 1 (Max.)
Attenuation	10.0 min. @ $f_o \pm 140\text{ MHz}$	15.0 min. @ $f_o + 140\text{ MHz}$ 20.0 min. @ $f_o - 140\text{ MHz}$
Impedance	50 Ω	
Operation Temp	-40 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$	
Toko Dimensions	4.5 x 5.1 x 2.8mm	12.5x 14 x 5.0mm
Temstron DIM.	7.5 x 6.0 x 3.0mm	6.5 x 6.0 x 3.0mm



Tolerance Unless
Otherwise Specified : ± 0.20
Unit : mm

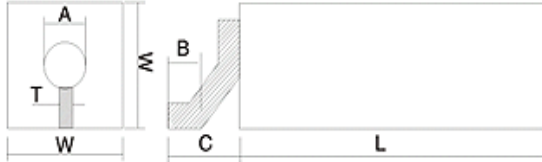
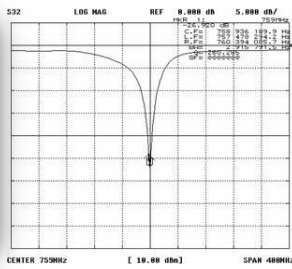
- ✓DR Filters
- ✓DR Duplexers
- ✓DR Resonators

Custom Design, Upon your requests

	Di-electric Filter	Di-electric Duplexer
Frequency	902.5 MHz	TX 830.0 MHz/ RX 875.0 MHz
Band Width	$f_o \pm 12.5\text{MHz}$ [890MHz~915MHz]	$f_o \pm 5\text{MHz}$
Insertion Loss	2.5 dB (Max.)	2.5 dB (Max.)
VSWR	1.7 (Max.)	1.7 (Max.)
Attenuation	12.0 min. @ $f_o \pm 32.5\text{ MHz}$	45.0 @ $f_r \pm 5.0$
Temstron DIM.	11.0 x 4.5 x 15.0mm	24.0 x 10.0 x 4.1mm



Dielectric Resonators



Type	Part	W (O/D)	A (I/D) (mm)	B (mm)	C (mm)	T (mm)
R120		12.0 ± 0.2	1 Φ4.0 ± 0.2	without tab	/	/
			2 Φ3.55 ± 0.2	1.5	3.2	1.0
R100		10.0 ± 0.2	1 Φ3.3 ± 0.2	1.3	3.0	1.0
R80		8.0 ± 0.2	1 Φ2.7 ± 0.2	1.3	2.6	0.7
R60		6.0 ± 0.2	1 Φ2.5 ± 0.2	without tab	/	/
			2 Φ2.2 ± 0.2	1.2	2.4	0.7
			3 Φ2.2 ± 0.2			
R50		5.0 ± 0.2	1 Φ1.8 ± 0.2	1.0	2.2	0.6
			2 Φ1.5 ± 0.2			
R40		4.0 ± 0.1	1 Φ1.8 ± 0.1	Without tab	/	/
			2 Φ1.5 ± 0.1			
			3 Φ1.2 ± 0.1			
R30		3.0 ± 0.1	1 Φ1.0 ± 0.1	0.7	1.5	0.5
R20		2.1 ± 0.1	1 Φ0.6 ± 0.1	0.5	1.2	0.5

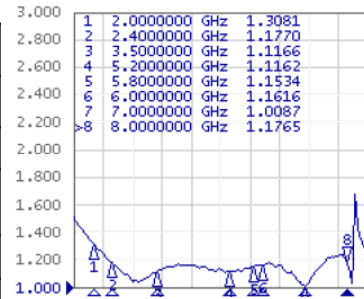
Material	Dielectric Constant	Tf ¹⁾	Type	Characteristic Impedance (Ω)	Wave Length	Frequency Range (MHz)	Q ²⁾ (min)
A Series	20 ± 1	0 ± 10	R120	①15 ② 17	λ/4	800~1300	800
					λ/2	1600~2700	1000
			R100	16	λ/4	800~1300	700
					λ/2	1600~3200	800
			R080	15	λ/4	1000~3200	650
					λ/2	2000~3000	700
			R060	①12 ② 14 ③15	λ/4	1000~2700	550
					λ/2	2000~3000	600
R050	①14 ② 17	λ/4	1300~3000	450			
		λ/2	2500~4000	500			
R040	①11 ②14 ③ 17	λ/4	1300~4000	380			
		λ/2	2500~4000	400			
R030	15	λ/4	1900~4000	320			
		λ/2	2800~5000	250			
B Series	36 ± 1	0 ± 10	R120	①12 ② 13	λ/4	600~1000	700
					λ/2	1200~2400	900
			R100	12	λ/4	600~1200	600
					λ/2	1200~2400	800
			R080	12	λ/4	800~1500	500
					λ/2	1600~3000	700
			R060	①10 ② 11 ③12	λ/4	800~1800	450
					λ/2	1600~3500	550
R050	①11 ② 13	λ/4	800~1800	380			
		λ/2	1600~3500	450			
R040	①9 ② 11 ③ 13	λ/4	1000~2700	320			
		λ/2	2000~4800	400			
R030	12	λ/4	1300~3000	220			
		λ/2	1300~3000	220			
C Series	80 ± 1	0 ± 10	R120	①7 ② 8	λ/4	400~800	650
					λ/2	800~1500	700
			R100	7	λ/4	600~800	550
					λ/2	1200~2400	650
			R080	7	λ/4	440~1000	450
					λ/2	1000~1500	550
			R060	①6 ② 7 ③ 7	λ/4	440~1300	400
					λ/2	1000~2200	470
R050	①7 ② 8	λ/4	500~1800	380			
		λ/2	1000~3000	450			
R040	①6 ② 7 ③ 8	λ/4	900~1600	200			
		λ/2	2000~4800	300			
R030	7	λ/4	900~1600	250			
R020	8	λ/4	900~1600	150			

Power Splitters

❖ 2-way 2-8GHz

Frequency Range (GHz)	2-8
Insertion loss (dB)	≤ 3.8
Isolation (dB)	≥ 20
VSWR	≤ 1.3 (2-6G) ≤ 1.4 (6-8G)
Amplitude Balance (dB)	≤ 0.3
Phase Balance (°)	≤ 5
Impedance (Ω)	50
Connectors	SMA
Power Rating (W)	10
Temperature (°C)	-30~+70
Size (mm)	40 X 36.5 X 12.2
Weight (Kg)	0.10

Tr1 S11 SWR 200.0m/ Ref 1.000 [F2]



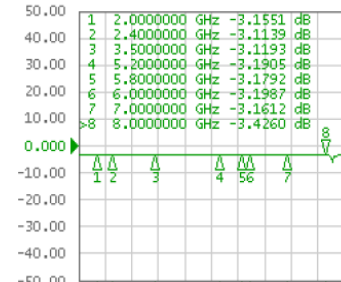
S11: Input VSWR,

Tr2 S22 SWR 200.0m/ Ref 1.000 [F2]



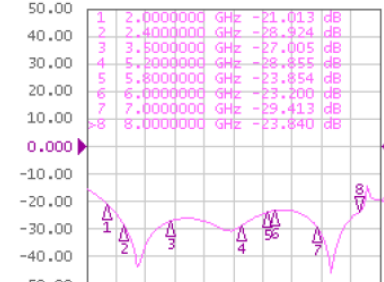
S22: Output VSWR

Tr3 S21 Log Mag 10.00dB/ Ref 0.000dB [F2]



S21: Insertion Loss

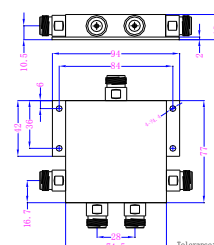
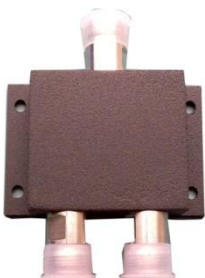
Tr4 S12 Log Mag 10.00dB/ Ref 0.000dB [F2 M]



S12: Isolation

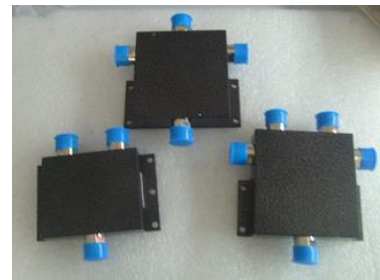
❖ 2~ 4 way (up to 32 way) 700M-2.7GHz

Model TPD-0.7/2.7	2-Way 1 In, 2 Out	3-Way 1 In, 3 Out	4-Way 1 In, 4 Out
Cover Frequency	700MHz to 2700MHz		
Insertion Loss	≤ 0.5dB	≤ 1.2dB	≤ 0.8dB
VSWR	≤ 1.3:1	≤ 1.65:1	≤ 1.3:1
Isolation	≥ 20dB	≥ 16dB	≥ 20dB
Power Handling	50 Watts Max.		
Port Connector	N-Female or SMA for option		
Impedance	50 ohm		
Temperature	Operate at -25°C ~ +65°C		
Package	Indoors (IP65 Outdoors upon requests)		
Dimensions (mm)	75 x 46 x 19	84 x 77 x 19	94 x 77 x 19



❖ Cavity Power Splitter

Frequency(MHz)	350-2700MHz		
Product Name	2 way	3 way	4 way
Insertion Loss(dB)	≤ 3.2	≤ 5.4	≤ 6.5
VSWR	$\leq 1.25:1$		
Power Capacity(W)	200		
Impedance(ohm)	50		
RF Connector	N-female or DIN(7/16)-female		
Application	Indoor		
Operating Temperature(deg)	-35~+60		
Color	Black-plated or Silvery-white Plated		
Material	Aluminum		
Relative Humidity	5%-95%		



❖ Micro-Strip Power Splitter

Frequency(MHz)	Available Frequencies: 800-2500MHz, 670-2700MHz		
Multi way	2 way	3 way	4 way
Frequency(MHz)	800-2500		
	670-2700		
Insertion Loss(dB)	$\leq 3.4\text{max}$	$\leq 5.5\text{max}$	$\leq 6.5\text{max}$
Isolation(dB)	≥ 20		
	≥ 16		
Power Rating(W)	50		
Impedance(ohm)	50		
VSWR	$\leq 1.30:1$		
RF Connector	N-type or SMA-type		
Dimensions (mm)	210.1×60.4×20	235.4×60.4×18	235.4×60.4×18
Including Connectors			
Weight(kg)	0.175	0.21	0.23
Color	Black-plated		
Relative Humidity	5%-95%		
Temperature(deg)	-35~+60		
Application	Indoor or Outdoor		

Power Splitters (75 ohm)

Specification	Frequkency Range	2 WAY SPLITTER		3 WAY SPLITTER	
		TYP	QA	TYP	QA
Insertion loss	5-40MHz	4.5	5.5	8.0	8.5
	40-862MHz	4.5	5.5	8.0	8.5
	862-1750MHz	5.5	6.0	10.0	10.5
	1750-2050MHz	5.5	6.0	10.0	10.5
	2050-2450MHz	5.5	6.5	11.0	11.5
Isolation	5-40MHz	20	16	22	18
	40-862MHz	35	29	35	29
	862-1750MHz	23	20	23	20
	1750-2050MHz	23	20	23	20
	2050-2450MHz	23	20	23	20
Return loss input	5-40MHz	12	10	12	10
	40-862MHz	12	10	12	10
	862-1750MHz	12	10	12	10
	1750-2050MHz	12	10	12	10
	2050-2450MHz	12	10	12	10

POWER PASS 500mA DIODE DIODE STEERED,ALL PORTS POWER PASS

IMPEDANCE 5-2450 75 OHM

Specification	Frequkency Rang	4 WAY SPLITTER		6 WAY SPLITTER		8 WAY SPLITTER	
		TYP	QA	TYP	QA	TYP	QA
Insertion loss	5-40MHz	9.0	10.0	11.0	12.0	12.5	13.5
	40-862MHz	9.0	10.0	11.0	12.0	12.5	13.5
	862-1750MHz	11.5	12.0	14.5	16.0	16.0	17.5
	1750-2050MHz	11.5	12.0	15.0	16.0	16.0	17.5
	2050-2450MHz	12.0	12.5	16.5	17.5	17.5	18.5
Isolation	5-40MHz	25	20	25	20	25	20
	40-862MHz	35	29	35	29	35	29
	862-1750MHz	23	20	23	20	23	20
	1750-2050MHz	23	20	23	20	23	20
	2050-2450MHz	23	20	23	20	23	20
Return loss input	5-40MHz	12	10	12	10	10	8
	40-862MHz	12	10	12	10	10	8
	862-1750MHz	12	10	12	10	12	10
	1750-2050MHz	12	10	12	10	12	10
	2050-2450MHz	12	10	12	10	12	10

3dB Hybrid Couplers and RF Attenuators

❖ 3 Db Hybrid Couplers

Frequency Range	800-2500MHz	700-2700MHz	800-2700MHz
Insertion Loss	≤0.5dB		
Coupling	3±0.5 dB	3±0.7 dB	3±0.7 dB or 3±0.5 dB
Isolation	≥20 dB		
VSWR	≤1.3:1		
Impedance	50 OHMS		
Power Handling	200 Watts		300 Watts or 500 Watts
IM3	≤-140dBc@(+43dBm×2)		
Port Connectors	N-Female		N-Female of DIN-F
Operate Temperature	-20°C to +60°C		-30°C to +70°C



❖ Fixed/Coaxial DC-3G (2G) Attenuator

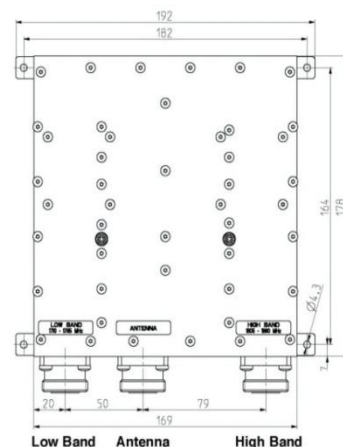
Frequency	DC-3GHz					
VSWR	≤ 1.20:1					
Power	5w(2w)	10w	30w(25w)	50w	100w	200w(150w)
Impedance	50 ohm					
Attenuation	1-30dB					
Attenuation Accuracy	±0.5					
Connector	N-male or N-female			DIN-male or DIN-female		
Temperature	-40~+80					

❖ Fixed/Coaxial DC-3G (2G) Dummy Load/Termination Load

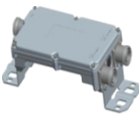




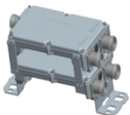


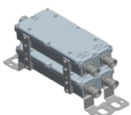




Frequency	DC-3GHz					
VSWR	≤ 1.20:1					
Power	5w(2w)	10w	30w	50w	100w	200w
Impedance	50 ohm					
Connector	N-type or DIN-type					
Temperature	-40~+125					
Humidity	5%-95%					

Low PIM Diplexer

Pass Band	RX	TX
Frequency	1710-1785MHz	1805-1880MHz
Loss	≤0.85dB	≤0.85dB
VSWR	≤1.25dB	≤1.25dB
Rejection	1805-1880MHz≥60dB	1710-1785MHz≥60dB
Impedance	50Ω	
PORT	In DC stop between low and high	
PIM3	2tones@43dBm≤-160dBc	
Power Connectors	250W (Max)	
Dimensions (w*h*d)	192*42.5*199.6mm	483*88.1*199.6mm

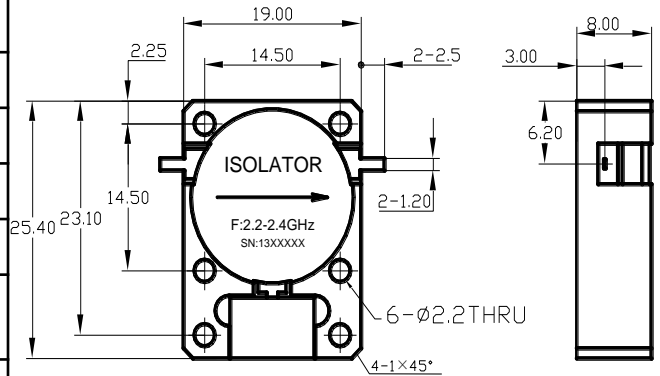


Dual-Band Combiner (GSM & WCDMA)

MHz	380-960 1710-2700	790-862 880-960	806-824 851-869	806-960 1710-2170	900-960 & 1427.9- 1485.5 1960-2170
Single unit					
Dual unit					
MHz	1710-1880 1920-2170	380-960 & 1710- 1880 1920-2170	1710-2180 2400-2700		
Single unit					
Dual unit					

❖ Isolator

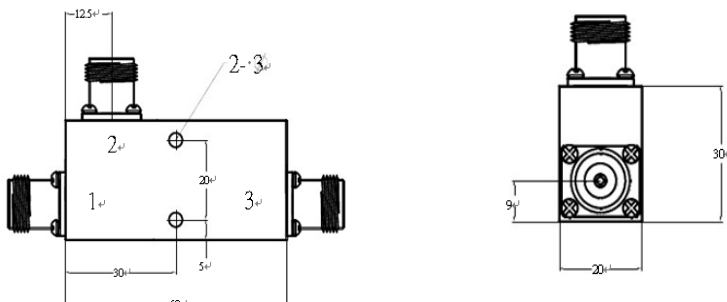
Items	Room Temp.	-20°C ~+85°C
Frequency Range	2.2~2.4GHz	2.2~2.4GHz
Insertion Loss	≤0.3dB	≤0.35dB
Isolation	≥22dB	≥20dB
VSWR	≤1.20:1	≤1.25:1
Forward Power	100W	
Reverse Power	100W	
Operating Temperature	-20°C ~+85°C	
Port Connectors	Micro-strip W/W	
Direction	As drawing ; left to right	



GB/T 1804-2000

❖ Circulator

Items	Specifications
Frequency	1850MHz-1910MHz & 1930MHz-1990MHz
Insertion Loss	1-2 ≤ 0.5dB , 3-1 ≤ 1.5dB
Ripple	0.5 (3-1)
Isolation	3-2 , 2-1 ≥ 21dB 1-3 ≥ 45dB
VSWR	≤ 1.25:1
Operating Temp	-20~+70°C
Forward Power	50W
Reverse Power	20W
Input Port / Output Port	F-Female / F-Female





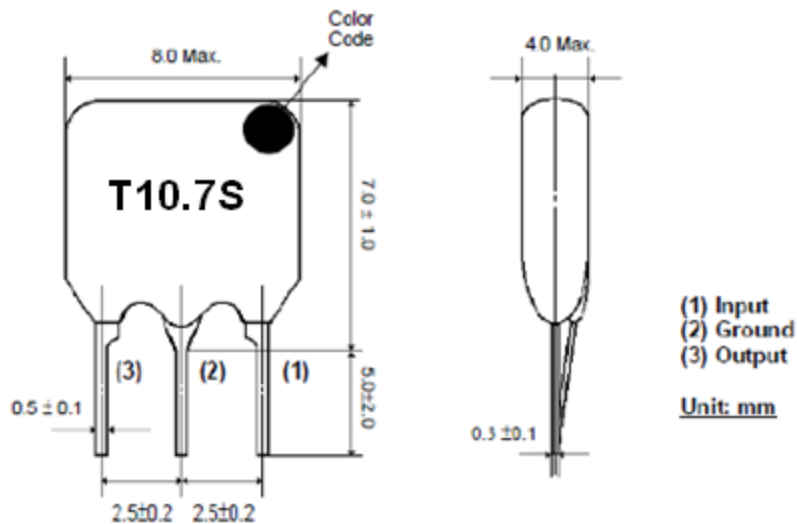
FEATURES

1. Low Cost
2. FM Use
3. Low Profile
4. Excellent Temperature Stability
5. High Durability

■ TT10.7 Series TT10.7 Series Filter

GENERIC SPECIFICATION

Part Number	3dB Band Width.(KHz)	20dB Band Width (KHz)	Insert Loss (dB max)	Spurious Attenuation (9-12MHz) (dBmin)
TT10.7M Series of ceramic filter for FM receiver				
TT10.7MA5	280±50	650	6	-30
TT10.7MS2	230±50	600	6	-40
TT10.7MS3	180±50	520	7	-40
TT10.7MJ	150±50	400	10	-38
TT10.7MA10 Series of Ceramic Filter (Low-Loss Type)				
TT10.7MA5A10	280±50	590	2.5±2.0	-30
TT10.7MS2A10	230±50	520	3.0±2.0	-35
TT10.7MS3A10	180±50	470	3.5±1.5	-35
TT10.7MJA10	150±50	360	4.5±2.0	-35
Wide/Narrow Band-width Type TT10.7M Series of Ceramic Filter				
TT10.7MA19	350min	950	3.0±2.0	-20
TT10.7MA20	330±50	680	4.0±2.0	-30
TT10.7MHY	110±30	350	7.0±2.0	-30
TT10.7MFP	20min	95	6.0max	-24





FEATURES

1. Low Cost
2. FM Use
3. Chip Type
4. Excellent Temperature Stability
5. High Durability

■ TTCA10.7 Series TTCV10.7 Series Filter

Part Number	3dB Band Width.(KHz)	20dB Band Width (KHz) max	Insert Loss (dB) max	Spurious Attenuation (9-12MHz) (dB) min
TTCA10.7MA5	280±50	650	6.0	30
TTCA10.7MS2	230±50	600	6.0	30
TTCA10.7MA5	280±50	590	3.0±2.0	35
TTCA10.7MS2	230±50	510	3.5±2.0	35
TTCA10.7MS3	180±40	470	4.0±2.0	35



■ TT U/W TTM U/W Series Filter

FEATURES

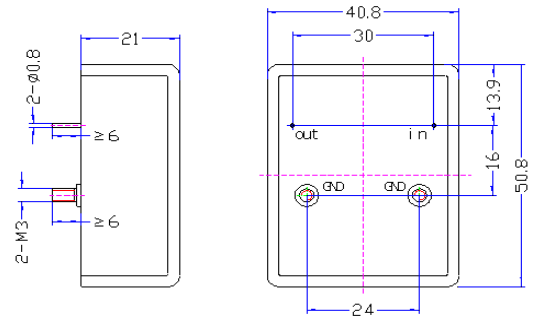
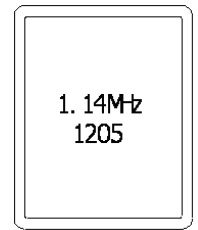
1. Low Cost
2. Communication Use
3. Low Profile
4. Excellent Temperature Stability
5. High Durability

GENERIC SPECIFICATION

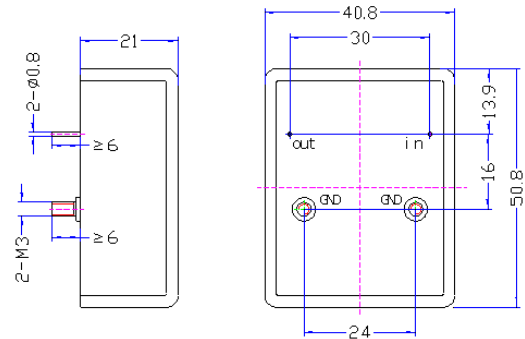
Part Number	Center Freq (KHz)	Insertion Loss (dB)max	Pass Band Ripple (dB)max	6dB Band Width (KHz)min	40dB Band Width (KHz)max (TT455 U)	50dB Band Width (KHz)max (TT455 W)	Stop Band Attenuation fo±100KHz (dB)min		Input/ Output Impedance (Ω)	
							TT455 U	TT455 W		
TT455BU/W	TTM455BU/W	455±2.0	4.0	2	±15	±30	±30	28	40	1500
TT455CU/W	TTM455CU/W	455±2.0	4	2	±12.5	±24	±24	28	40	1500
TT455DU/W	TTM455DU/W	455±1.5	4	2	±10	±20	±20	28	40	1500
TT455EU/W	TTM455EU/W	455±1.5	6	2	±7.5	±15	±15	28	40	1500
TT455FU/W	TTM455FU/W	455±1.5	6	2	±6	±12.5	±12.5	28	40	2000
TT455GU/W	TTM455GU/W	455±1.5	6	2	±4.5	±10	±10	28	40	2000
TT455HU/W	TTM455HU/W	455±1.0	6	2	±3	±9	±9	28	40	2000
TT455IU/W	TTM455IU/W	455±1.0	6	2	±2	±7.5	±7.5	28	40	2000
TT455HTU/W	TTM455HTU/W	455±1.0	6	2	±3	±9	±9	35	60	2000

Crystal Filters

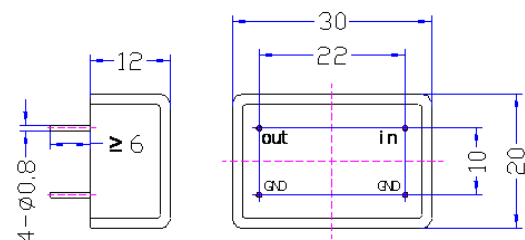
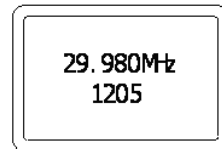
Parameters	
• Center Frequency (F_0)	1.14MHz
• Pass band (3dB Bandwidth)	3.0dB@ $F_0 \pm 1.5$ KHz Minimum
• Stop band (50dB Bandwidth)	50dB@ $F_0 \pm 4.0$ KHz Maximum
• Pass Band Insertion Loss	≤ 6.0 dB
• Pass Band Ripple	1.0dB Maximum
• Attenuation	50dB Minimum
• Operating Temperature Range	-10°C to +60°C
• Impedance	Input 10K Ohms; Output 10K Ohms
• Configuration	As Below (Size: 50.8×40.8×21mm)



Parameters	
• Center Frequency (F_0)	960KHz
• Pass band (3dB Bandwidth)	3.0dB@ $F_0 \pm 1.5$ KHz Minimum
• Stop band (45dB Bandwidth)	45dB@ $F_0 \pm 4.0$ KHz Maximum
• Pass Band Insertion Loss	≤ 6.0 dB
• Pass Band Ripple	1.0dB Maximum
• Attenuation	50dB Minimum
• Operating Temperature Range	-10°C to +60°C
• Impedance	Input 2.2K Ohms; Output 2.2K Ohms
• Configuration	As Below (Size: 50.8×40.8×21mm)



Parameters	
• Center Frequency (F_0)	29.980MHz
• Pass band (3dB Bandwidth)	3.0dB@ $F_0 \pm 70$ KHz Minimum
• Stop band (40dB Bandwidth)	40dB@ $F_0 \pm 160$ KHz Maximum
• Pass Band Insertion Loss	≤ 5.0 dB
• Pass Band Ripple	3.0dB Maximum
• Operating Temperature Range	-10°C to +60°C
• Impedance	Input 500 Ohms; Output 50 Ohms//22pf
• Configuration	As Below (Size: 30×20×12mm)



7mm TYPE 7P High Frequency

7mm TYPE 7P High Frequency with Internal Capacitor

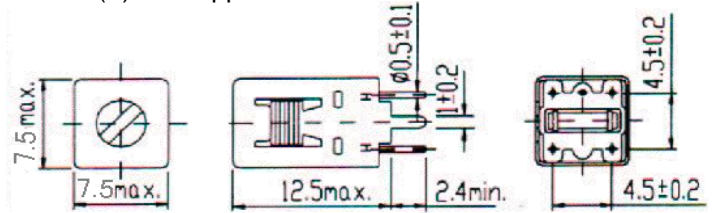
Frequency Range: 2-20MHz

Inductance Range: 1-82uH

Temperature Coefficient of: Inductor TC (L) 220±220ppm/°C

With Internal Capacitor TC (F) 0±250ppm/°C

Internal Capacitance Values: 5-100pF



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

TYPE 7P High Frequency

TOKO Part Number	Inductance Range (uH)	Q (min.)	Test Frequency (MHz)
A119ANS-18970Z	4.7±10%	105	7.96
A119ANS-18971Z	5.6±10%	105	7.96
A119ANS-18972Z	6.8±10%	110	7.96
A119ANS-18973Z	8.2±10%	110	7.96
A119ANS-18974Z	10.0±10%	110	7.96
A119ANS-18975Z	12.0±10%	80	2.52
A119ANS-18976Z	15.0±10%	85	2.52
A119ANS-18977Z	18.0±10%	90	2.52
A119ANS-18978Z	22.0±10%	90	2.52
A119ANS-18979Z	27.0±10%	90	2.52
A119ANS-18980Z	33.0±10%	90	2.52
A119ANS-18981Z	39.0±10%	90	2.52
A119ANS-18982Z	47.0±10%	85	2.52
A119ANS-18983Z	56.0±10%	85	2.52
A119ANS-18984Z	68.0±10%	85	2.52
A119ANS-18985Z	82.0±10%	85	2.52

TYPE 7P High Frequency with Internal Capacitor

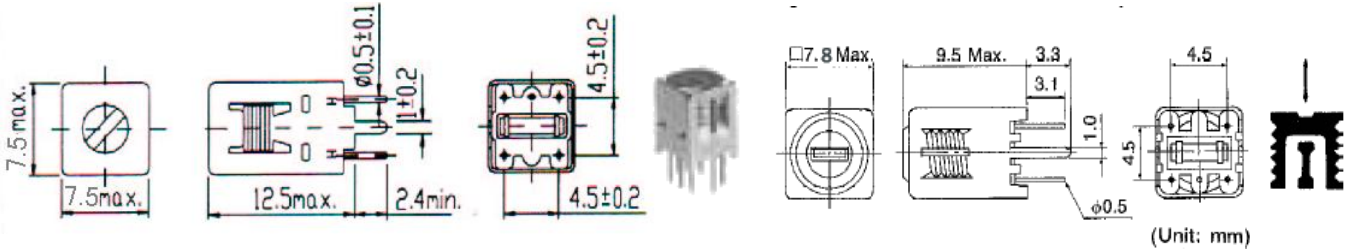
TOKO Part Number	Turns Ratio:			Tuning Capacitance(pF)	Q	Test Frequency (MHz)
	1-3/2-3	1-3/4-6	Others			
119AC-470033NO	14:3	14:3		47+5(ext)	100±20%	10.7
119AC-470052NO	14:5	14:2		47+5(ext)	110±20%	10.7
119AC-470072NO	14:7	14:2		47+5(ext)	110±20%	10.7
119AC-470073NO	14:7	14:3		47+5(ext)	110±20%	10.7
119AC-470084LO				47+3(ext)	90±20%	10.7
119AC-470112NO	14:11	14:2		47+5(ext)	120±20%	10.7
119AC-750111MO			2-3/4-6 11:1	75+5(ext)	100±20%	10.7
119AC-750112MO			2-3/4-6 11:2	75+5(ext)	100±20%	10.7
119FC-560061NO	12:6	12:1		56+0(ext)	120±20%	10.7
119FC-820051NO	10:5	10:1		82+0(ext)	110±20%	10.7
119LC-470033NO	14:3	14:3		47+5(ext)	65±20%	10.7
119LC-470053NO	14:5	14:3		47+5(ext)	70±20%	10.7
119LC-470073NO	14:7	14:3		47+5(ext)	70±20%	10.7

7mm TYPE 7PA

Frequency Range: 10-200kHz
Inductance Range: 1-25mH
Temperature Coefficient: TC(L) 250ppm/°C max
Internal Capacitance Values: 10~6800pF

7mm TYPE 7PLA

Frequency Range: 10-200kHz
Inductance Range: 1-15mH
Temperature Coefficient: TC (L) 750±250ppm/°C
Internal Capacitance Values: 10-6800pF



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

TYPE 7PA

TOKO Part Number	Inductance Range (mH)	Q (min.)	Test Frequency (KHz)
126ANS-T1094Z	1.0±6%	60	252
126ANS-T1095Z	1.2±6%	60	252
126ANS-T1096Z	1.5±6%	60	252
126ANS-T1097Z	1.8±6%	60	252
126ANS-T1098Z	2.2±6%	60	252
126ANS-T1099Z	2.7±6%	60	252
126ANS-T1100Z	3.3±6%	60	252
126ANS-T1101Z	3.9±6%	60	252
126ANS-T1102Z	4.7±6%	60	252
126ANS-T1103Z	5.6±6%	60	252
126ANS-T1104Z	6.8±6%	60	252
126ANS-T1105Z	8.2±6%	60	252
126ANS-T1106Z	10.0±6%	60	79.6
126ANS-T1107Z	12.0±6%	60	79.6
126ANS-T1108Z	15.0±6%	60	79.6
126ANS-T1109Z	18.0±6%	60	79.6
126ANS-T1110Z	22.0±6%	60	79.6

TYPE 7PLA

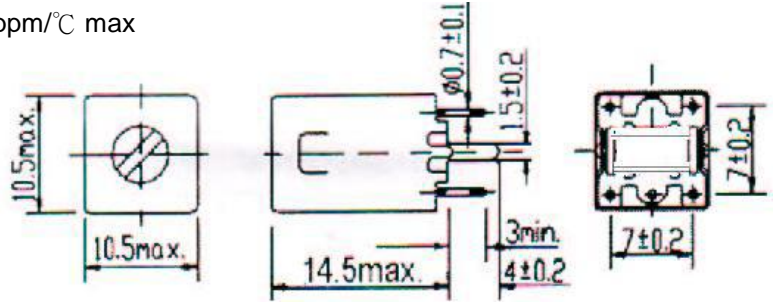
TOKO Part Number	Inductance Range (mH)	Q (min.)	Test Frequency (KHz)
284XNS-1111Z	2.7±6%	80	252
284XNS-1158Z	3.3±6%	70	252
284XNS-1356Z	3.9±4%	70	252
284XNS-1357Z	4.7±3%	80	252
284XNS-1015Z	6.8±6%	70	252
284XNS-1132Z	8.2±5%	70	252
284XNS-1394Z	10.0±5%	50	252
284XNS-1016Z	12.0±6%	50	79.6
284XNS-1017Z	15.0±6%	50	79.6

10mm TYPE 10PA

Frequency Range: 10-200kHz

Inductance Range: 1-56mH

Temperature Coefficient: TC (L) $220 \pm 220 \text{ ppm}/^\circ\text{C}$ max



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

TYPE 10PA

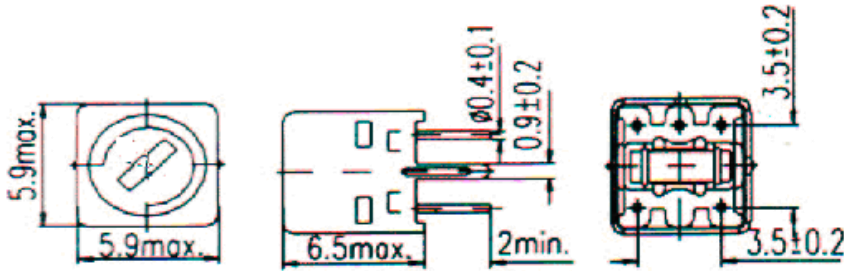
TOKO Part Number	Inductance Range (mH)	Q (min.)	Test Frequency (KHz)
CLNS-T1018Z	1.0±10%	80	252
CLNS-T1019Z	1.2±10%	80	252
CLNS-T1020Z	1.5±10%	80	252
CLNS-T1021Z	1.8±10%	80	252
CLNS-T1022Z	2.2±10%	80	252
CLNS-T1023Z	2.7±10%	80	252
CLNS-T1024Z	3.3±10%	80	252
CLNS-T1025Z	3.9±10%	80	252
CLNS-T1026Z	4.7±10%	80	252
CLNS-T1027Z	5.6±10%	80	252
CLNS-T1028Z	6.8±10%	80	252
CLNS-T1029Z	8.2±10%	80	252
CLNS-T1030Z	10.0±10%	70	79.6
CLNS-T1031Z	12.0±10%	70	79.6
CLNS-T1032Z	15.0±10%	70	79.6
CLNS-T1033Z	18.0±10%	70	79.6
CLNS-T1034Z	22.0±10%	70	79.6
CLNS-T1035Z	27.0±10%	70	79.6
CLNS-T1036Z	33.0±10%	70	79.6
CLNS-T1037Z	39.0±10%	70	79.6
CLNS-T1038Z	47.0±10%	70	79.6
CLNS-T1039Z	56.0±10%	70	79.6

5mm TYPE 5P, 5PG, 5PA, 5PAG

Frequency Range: 5P, 5PG 0.2~2.0MHz, 5PA, 5PAG 0.1-1MHz
 5P, 5PG High Frequency 1-15MHz

Inductance Range: 5P, 5PG 30-680uH
 5P, 5PG High Frequency 1-40UH
 5PA, 5PAG 100uH-4.5mH

Temperature Coefficient: TC (L) of 5P, 5PG $850 \pm 350 \text{ppm}/^\circ\text{C}$
 5PA, 5PAG $750 \pm 450 \text{ppm}/^\circ\text{C}$ and
 5P, 5PG High Frequency $220 \pm 220 \text{ppm}/^\circ\text{C}$.
 With Internal Capacitor TC (F) of 5P, 5PG or 5P, 5PG
 High Frequency $0 \pm 250 \text{ppm}/^\circ\text{C}$



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

TYPE 5P

TOKO Part Number	Inductance Range (uH)	Q (min.)	Test Frequency (MHz)
5PNR-3509Z	47.0±5%	40	2.52
5PNR-3510Z	56.0±5%	40	2.52
5PNR-3511Z	68.0±5%	40	2.52
5PNR-3512Z	82.0±5%	40	2.52
5PNR-3513Z	100.0±5%	40	0.796
5PNR-3514Z	120.0±5%	40	0.796
5PNR-3515Z	150.0±5%	40	0.796
5PNR-3516Z	180.0±5%	40	0.796
5PNR-3517Z	220.0±5%	40	0.796
5PNR-3518Z	270.0±5%	40	0.796
5PNR-3519Z	330.0±5%	40	0.796
5PNR-3520Z	470.0±5%	40	0.796
5PNR-3537Z	560.0±5%	40	0.796
5PNR-3538Z	680.0±5%	40	0.796

TYPE 5PA

TOKO Part Number	Inductance Range (mH)	Q (min.)	Test Frequency (KHz)
451AN-0002Z	0.8±5%	65	796
451AN-0001Z	1.0±6%	50	252
451AN-0042Z	2.0±7%	40	252
451AN-0041Z	3.0±8%	50	252

TYPE 5P High Frequency

TOKO Part Number	Inductance Range (uH)	Q (min.)	Test Frequency (MHz)
332PN-3489Z	1.0±5%	55	7.96
332PN-3490Z	1.2±5%	55	7.96
332PN-3491Z	1.5±5%	55	7.96
332PN-3492Z	1.8±5%	55	7.96
332PN-3493Z	2.2±5%	55	7.96
332PN-3494Z	2.7±5%	55	7.96
332PN-3495Z	3.3±5%	55	7.96
332PN-3496Z	3.9±5%	55	7.96
332PN-3497Z	4.7±5%	55	7.96
332PN-3498Z	5.6±5%	55	7.96
332PN-3499Z	6.8±5%	55	7.96
332PN-3500Z	8.2±5%	55	7.96
332PN-3501Z	10.0±5%	55	2.52
332PN-3502Z	12.0±5%	55	2.52
332PN-3503Z	15.0±5%	55	2.52
332PN-3504Z	18.0±5%	55	2.52
332PN-3505Z	22.0±5%	55	2.52
332PN-3506Z	27.0±5%	55	2.52
332PN-3507Z	33.0±5%	55	2.52
332PN-3508Z	39.0±5%	55	2.52

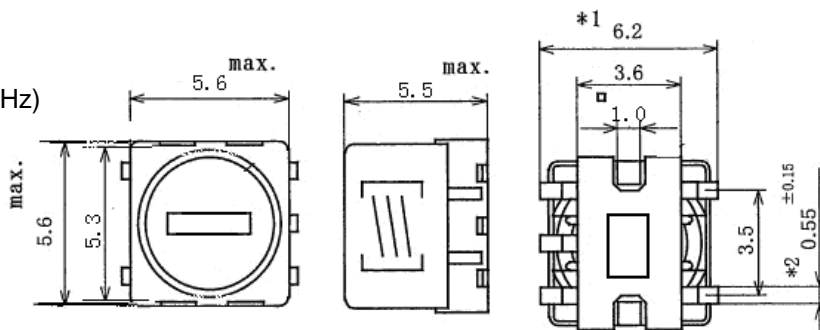
TYPE FSDV

For Reflow Soldering

Frequency Range: 0.2~15MHz

Inductance Range: 1uH~7mH

Q Approx: 60 (at 455kHz and 10.7MHz)



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

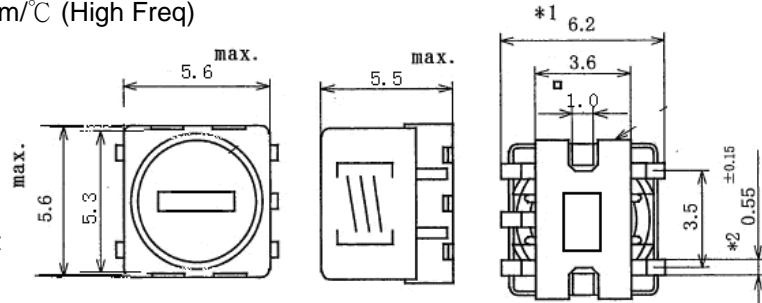
TYPE FSDV

TOKO Part Number	Inductance L (uH)	Q Min.	Test Frequency (MHz)	Inductance Adjustable Range ±(%)
836BN-0075Z	1.8	40	7.96	3
836BN-0076Z	2.0	40	7.96	3
836BN-0077Z	2.2	40	7.96	3
836BN-0078Z	2.4	40	7.96	6
836BN-0079Z	2.7	55	7.96	3
836BN-0080Z	3.0	55	7.96	3
836BN-0081Z	3.3	55	7.96	3
836BN-0082Z	3.6	55	7.96	4
836BN-0083Z	3.9	55	7.96	4
836BN-0084Z	4.3	55	7.96	4
836BN-0085Z	4.7	60	7.96	4
836BN-0086Z	5.1	60	7.96	4
836BN-0087Z	6.6	60	7.96	4
836BN-0088Z	6.2	60	7.96	4
836BN-0089Z	6.8	60	7.96	4
836BN-0090Z	7.5	65	7.96	4
836BN-0091Z	8.2	65	7.96	4
836BN-0092Z	9.1	65	7.96	4
836BN-0093Z	10	50	2.52	5
836BN-0094Z	11	50	2.52	5
836BN-0095Z	12	50	2.52	5
836BN-0096Z	13	50	2.52	5
836BN-0097Z	15	50	2.52	5
836BN-0098Z	16	50	2.52	5
836BN-0099Z	18	50	2.52	5
836BN-0100Z	20	50	2.52	5
836BN-0101Z	22	50	2.52	5
836BN-0102Z	24	55	2.52	6
836BN-0103Z	27	55	2.52	6
836BN-0104Z	30	55	2.52	6
836BN-0105Z	33	55	2.52	6
836BN-0106Z	36	55	2.52	6
836BN-0107Z	39	55	2.52	6
836BN-0108Z	43	55	2.52	6
836BN-0109Z	47	55	2.52	6
836BN-0110Z	51	55	2.52	6
836BN-0111Z	56	55	2.52	6
836BN-0112Z	62	55	2.52	6
836BN-0113Z	68	35	2.52	6
836BN-0114Z	75	35	2.52	6
836BN-0115Z	82	35	2.52	6
836BN-0116Z	91	35	2.52	6
836BN-0117Z	100	45	0.796	6
836BN-0118Z	110	45	0.796	6
836BN-0119Z	120	45	0.796	6
836BN-0120Z	130	45	0.796	6
836BN-0121Z	150	45	0.796	6

TOKO Part Number	Inductance L (uH)	Q Min.	Test Frequency (MHz)	Inductance Adjustable Range ±(%)
836AN-0122Z	160	45	0.796	6
836AN-0123Z	180	45	0.796	6
836AN-0124Z	200	45	0.796	6
836AN-0125Z	220	45	0.796	6
836AN-0126Z	240	45	0.796	6
836AN-0127Z	270	45	0.796	6
836AN-0128Z	300	45	0.796	6
836AN-0129Z	330	45	0.796	6
836AN-0130Z	360	45	0.796	6
836AN-0131Z	390	45	0.796	6
836AN-0132Z	430	45	0.796	6
836AN-0133Z	470	45	0.796	6
836AN-0134Z	510	45	0.796	6
836AN-0135Z	560	45	0.796	6
836AN-0136Z	620	40	0.796	6
836AN-0137Z	680	40	0.796	6
836AN-0138Z	750	40	0.796	6
836AN-0139Z	820	40	0.796	6
836AN-0140Z	910	40	0.796	6
836AN-0141Z	1000	40	0.252	6
836AN-0142Z	1100	20	0.252	6
836AN-0143Z	1200	20	0.252	6
836AN-0144Z	1300	20	0.252	6
836EN-0145Z	1500	25	0.252	6
836EN-0196Z	1600	25	0.252	6
836EN-0197Z	1800	30	0.252	6
836EN-0198Z	2000	30	0.252	6
836EN-0149Z	2200	30	0.252	6
836EN-0199Z	2400	30	0.252	6
836EN-0200Z	2700	30	0.252	6
836EN-0201Z	3000	30	0.252	6
836EN-0202Z	3300	30	0.252	6
836EN-0154Z	3600	30	0.252	6
836EN-0203Z	3900	30	0.252	6
836EN-0204Z	4300	30	0.252	6
836EN-0205Z	4700	30	0.252	6
836EN-0206Z	5100	30	0.252	6
836EN-0159Z	5600	30	0.252	6
836EN-0207Z	6200	30	0.252	6
836EN-0208Z	6800	30	0.252	6

Technical Specification

Frequency Range :	0.1MHz-2MHz 0.1MHz-15MHz (High Freq)
Inductance Range :	1uH-1400uH
Operating Temperature :	-10°C to +60°C
Unloaded Q :	30/65 (ref)
Inductance Variable Range :	Lo±3 to 5% (ref)
Temperature Coefficient :	TC(L) 80 ± 120ppm/°C TC(L) 140 ± 120ppm/°C (High Freq) TC(L) -40 ± 120ppm/°C TC(L) -80 ± 120ppm/°C (High Freq)
Quantity per Reel :	1000pcs



Remark: The Specification of the Replacement is subject to final confirmation which might be slight tolerance to the selection guide.

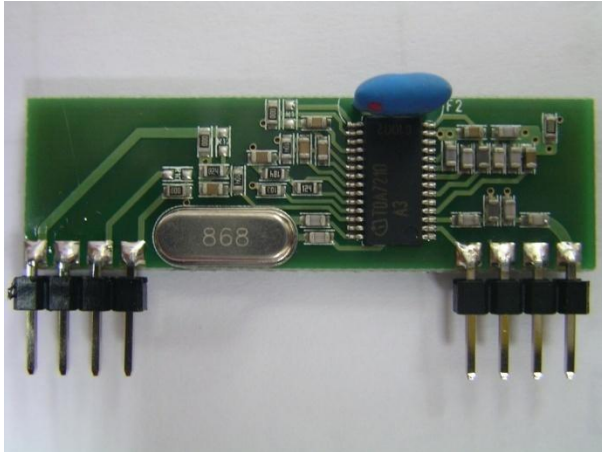
TYPE 5CCD

TOKO Ref	Inductance	Tol.	Qu	TestFreq of L (MHz)	Notes
614BN-9018Z	1.8uH	±3%	45	7.96	H.F.r
614BN-9021B	2uH	±3%	45	7.96	H.F.r
614BN-9022Z	2.2uH	±3%	45	7.96	H.F.r
614BN-9024IB	2.4uH	±3%	50	7.96	H.F.r
614BN-9027IB	2.7uH	±3%	50	7.96	H.F.r
614BN-9030Z	3.0uH	±3%	50	7.96	H.F.r
614BN-9033Z	3.3uH	±3%	55	7.96	H.F.r
614BN-9036IB	3.6uH	±4%	55	7.96	H.F.r
614BN-9039Z	3.9uH	±4%	55	7.96	H.F.r
614BN-9043Z	4.3uH	±4%	55	7.96	H.F.r
614BN-9047Z	4.7uH	±4%	55	7.96	H.F.r
614BN-90511B	5.1uH	±4%	65	7.96	H.F.r
614BN-9056Z	5.6uH	±4%	65	7.96	H.F.r
614BN-9062Z	6.2uH	±4%	65	7.96	H.F.r
614BN-9068Z	6.8uH	±4%	65	7.96	H.F.r
614BN-9075Z	7.5uH	±4%	65	7.96	H.F.r
614BN-9082Z	8.2uH	±4%	65	7.96	H.F.r
614BN-9091Z	9.1uH	±4%	45	7.96	H.F.r
614BN-9100Z	10uH	±5%	45	2.52	H.F.r
614BN-9110Z	11uH	±5%	45	2.52	H.F.r
614BN-9120Z	12uH	±5%	45	2.52	H.F.r
614BN-9130Z	13uH	±5%	45	2.52	H.F.r
614BN-9150Z	15uH	±5%	45	2.52	H.F.r
614BN-9160Z	16uH	±5%	45	2.52	H.F.r
614BN-9180Z	18uH	±5%	45	2.52	H.F.r
614BN-9200Z	20uH	±5%	45	2.52	H.F.r
614BN-9220Z	22uH	±5%	45	2.52	H.F.r
614BN-9240Z	24uH	±5%	45	2.52	H.F.r
614BN-9270Z	27uH	±5%	45	2.52	H.F.r
614BN-9300Z	30uH	±5%	45	2.52	H.F.r
614BN-9330Z	33uH	±5%	45	2.52	H.F.r
614BN-9360Z	36uH	±5%	45	2.52	H.F.r
614BN-9390Z	39uH	±5%	45	2.52	H.F.r
614BN-9430Z	43uH	±5%	45	2.52	H.F.r
614BN-9470Z	47uH	±5%	45	2.52	H.F.r
614BN-9510Z	51uH	±5%	45	2.52	H.F.r
614BN-9560Z	56uH	±5%	45	2.52	H.F.r
614BN-9620Z	62uH	±5%	45	2.52	H.F.r
614BN-9680Z	68uH	±5%	30	2.52	H.F.r
614BN-9750Z	75uH	±5%	30	2.52	H.F.r
614BN-9820Z	82uH	±5%	30	2.52	H.F.r
614BN-9910Z	91uH	±5%	30	2.52	H.F.r
614BN-9100Z	100uH	±5%	45	0.796	H.F.r

RX MODULE

MODELNO:RXA22-868 MHz

- ✓ Ideal for 868MHz Remote Keyless-Entry Receives
- ✓ Phase-Locked loop Feature
- ✓ High sensitivity typically exceeds -110dB



General Descriptions

The RXA22 is a miniature receiver module that receives On-off keyed (OOK) modulation signal and demodulated to digital signal for the next decoder stage. Local Oscillator is made of PLL structure. The result is excellent performance in a simple-to-use.

The RXA22 is designed specifically for unlicensed remote-control and wireless security receiver operating at 868MHz in the USA under FCC Part 15 regulation

Applications

- Home security systems
- Car Alarm systems
- Remote gate controls
- Sensor reporting

Specification

PARAMETER	DESCRIPTION	VALUE		
		MIN	TYP	MAX
• SENSITIVITY	V _{cc} =5.0V, TA=27°C BER=3/100, 1Kbps	868MHz -107dB	-110dB	
• MODULATION			ASK	
• POWER SUPPLY		4.75V	5V	5.25V
• SUPPLY CURRENT			4.6mA	5.5mA
• DATA RATE			1Kbps	4Kbps
• OPERATING TEMPERATURE		-40°C		+85°C

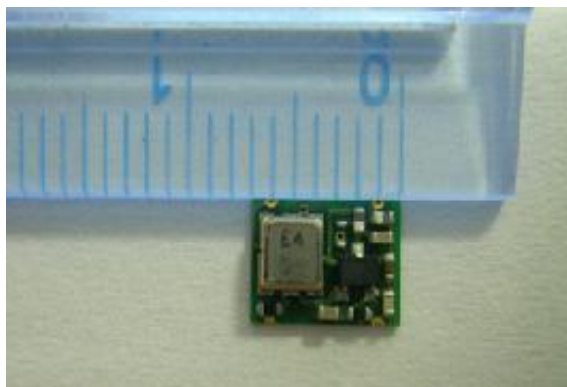
General Descriptions

Radio transmitter module with SAW Resonator and External Antenna.

The TXA1-434-S75 is an hybrid circuit that allows to realize a complete radio transmitter adding a coding circuit

Applications

- ✓ Home security systems
- ✓ Car alarm
- ✓ Remote gate control
- ✓ Sensor reporting



Specification

PARAMETER	TEMP	CONDITION	LIMIT			UNIT
			min.	typ.	max.	
• Current Consumption	23+-3deg.C	Vcc=12 VDC, DATA=3V	-	-	13.5	mA
• TX Frequency	23+-3 °C	-	-	433.92	-	MHz
• Frequency Tolerance	23+-3deg.C			+/-75		KHz
• Output Power	23+-3deg.C	Vcc=12 VDC, DATA=3V	7	10	-	dBm
• DATA Rate	23+-3deg.C	-	-	1	3	KHz
• MODULATION	23+-3deg.C	DATA=3 VDC or 0 VDC	-	ASK	-	-



Cable Assemblies

