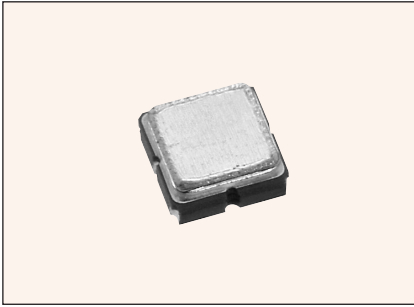


Surface Acoustic Wave Filter (SAW Filter)



TQS-828A-7R

■ Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

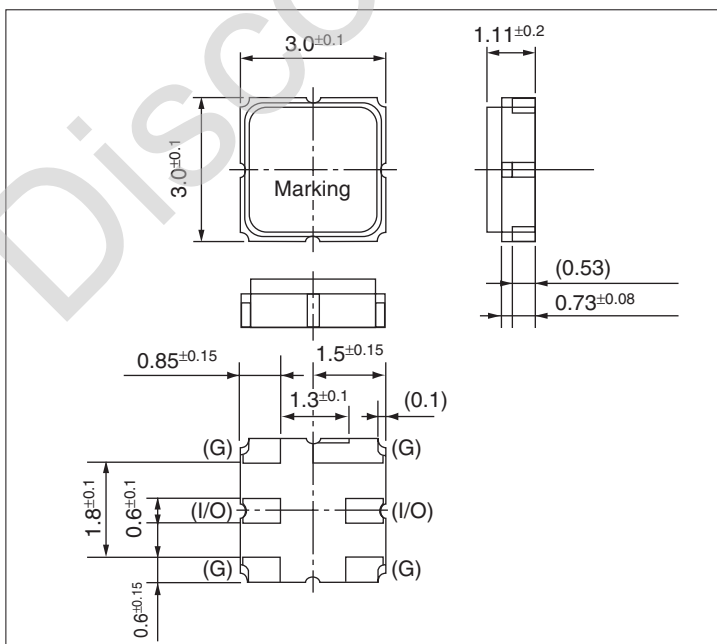
■ Application

- RF filter for Cellular Phone PDC 1.5GHz system (Rx)

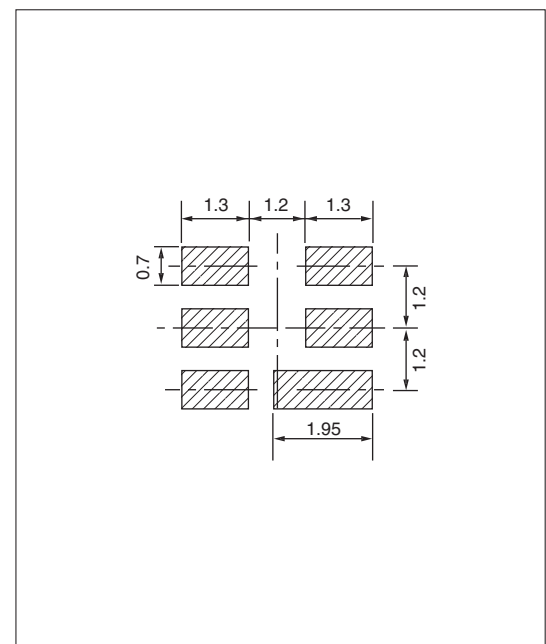
■ Specifications

Type	TQS-828A-7R
Nominal frequency	1489 MHz
Pass band	1477 to 1501 MHz
Insertion loss	2.5 dB max.
Pass band ripple	1.5 dB max.
VSWR	2.5 max.
Stop band attenuation (Referred to through Level)	
1429 to 1453 MHz	15 dB min.
1607 to 1631 MHz	30 dB min.
1737 to 1761 MHz	35 dB min.
Terminating impedance	50 Ω
Operating temperature range	-20 °C to +75 °C

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]

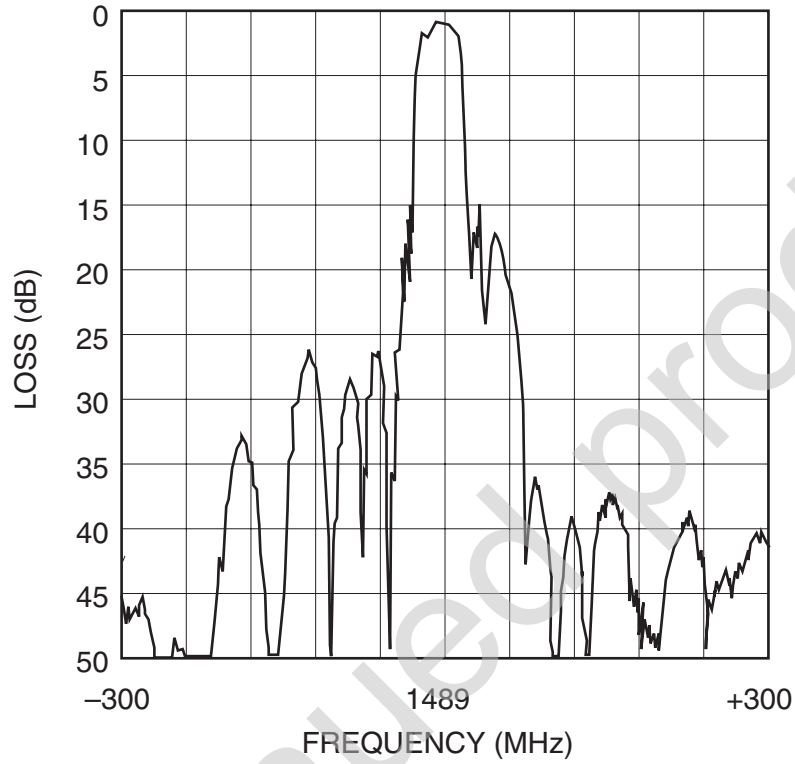


Surface Acoustic Wave Filter (SAW Filter)

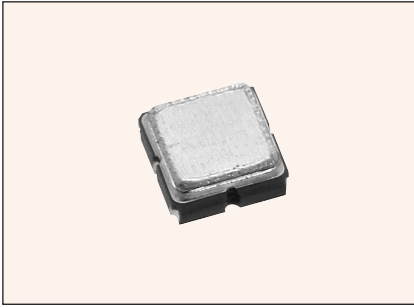
RF Filter for Cellular Phone
PDC 1.5GHz system (Rx)

TQS-828A-7R
1489 MHz

■ Electrical Data



Surface Acoustic Wave Filter (SAW Filter)



TQS-829A-7R

■ Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

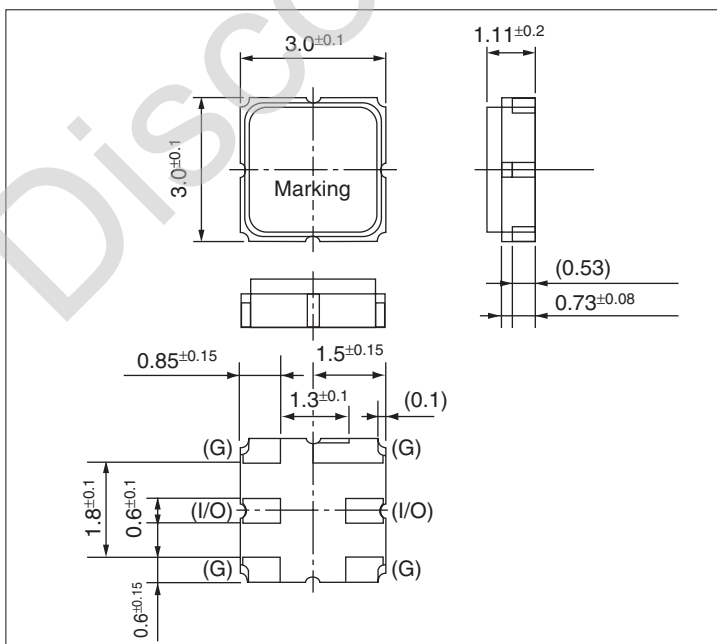
■ Application

- RF filter for Cellular Phone PDC 1.5GHz system (Tx)

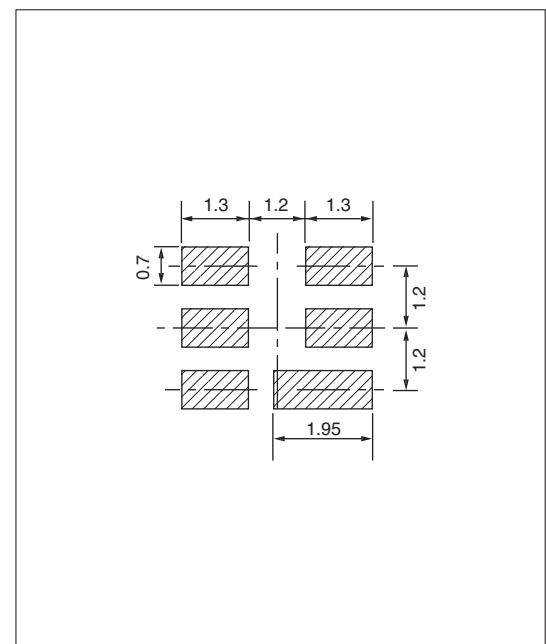
■ Specifications

Type	TQS-829A-7R
Nominal frequency	1441 MHz
Pass band	1429 to 1453 MHz
Insertion loss	2.5 dB max.
Pass band ripple	1.5 dB max.
VSWR	2.5 max.
Stop band attenuation (Referred to through Level)	
1477 to 1501 MHz	13 dB min.
2858 to 2906 MHz	25 dB min.
4287 to 4359 MHz	7 dB min.
Terminating impedance	50 Ω
Operating temperature range	-20 °C to +75 °C

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]

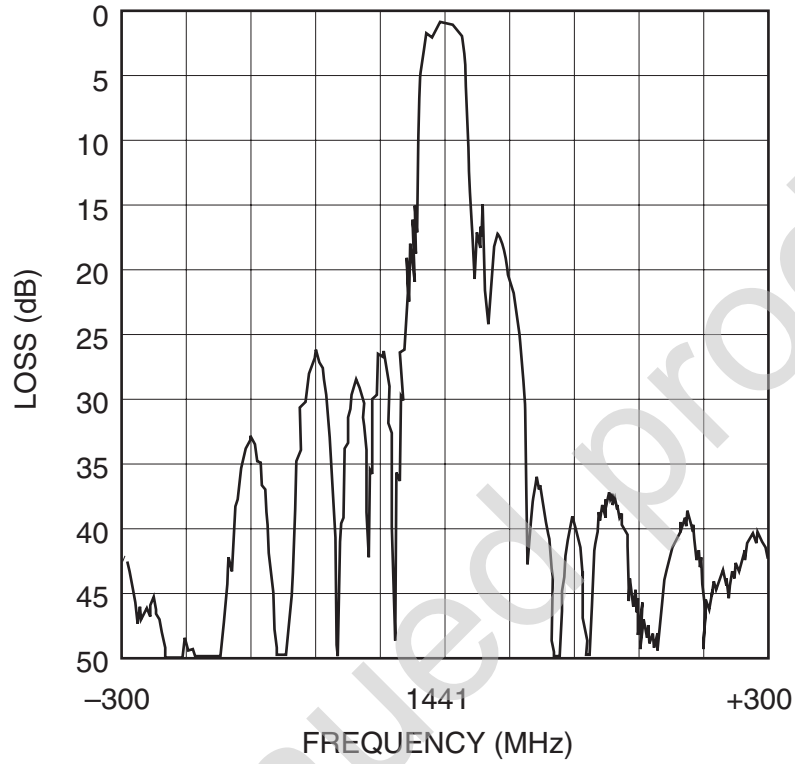


Surface Acoustic Wave Filter (SAW Filter)

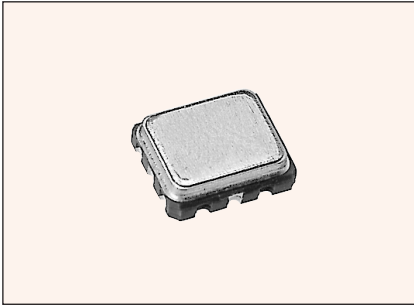
RF Filter for Cellular Phone
PDC 1.5GHz system (Tx)

TQS-829A-7R
1441 MHz

■ Electrical Data



Surface Acoustic Wave Filter (SAW Filter)



TQS-830A-7R

■ Features

- Miniature size : 5.2(W) x 4.5(D) x 1.55(H)mm
- High selectivity

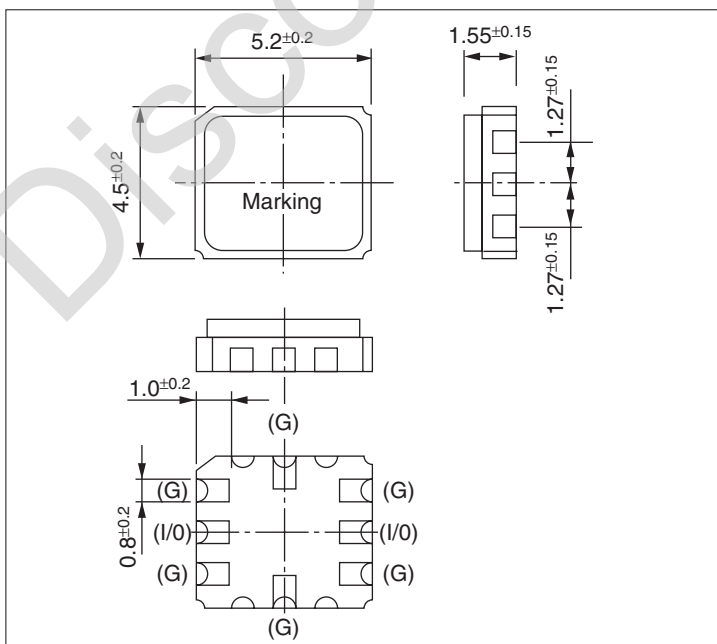
■ Application

- General

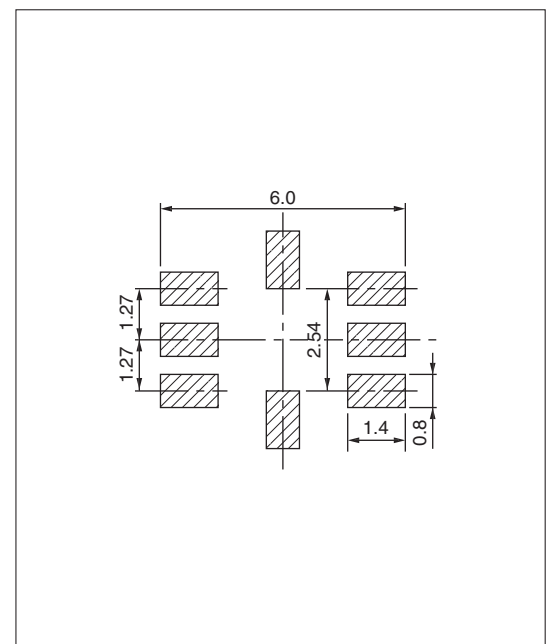
■ Specifications

Type	TQS-830A-7R
Nominal frequency [fo]	429.55 MHz
Pass band	fo ±0.4 MHz min.
Insertion loss	3.5 dB max.
Stop band attenuation fo ±42.4 MHz	55 dB min.
Terminating impedance	50 Ω
Operating temperature range	-10 °C to +50 °C

■ Package Outlines [Dimensions in mm]



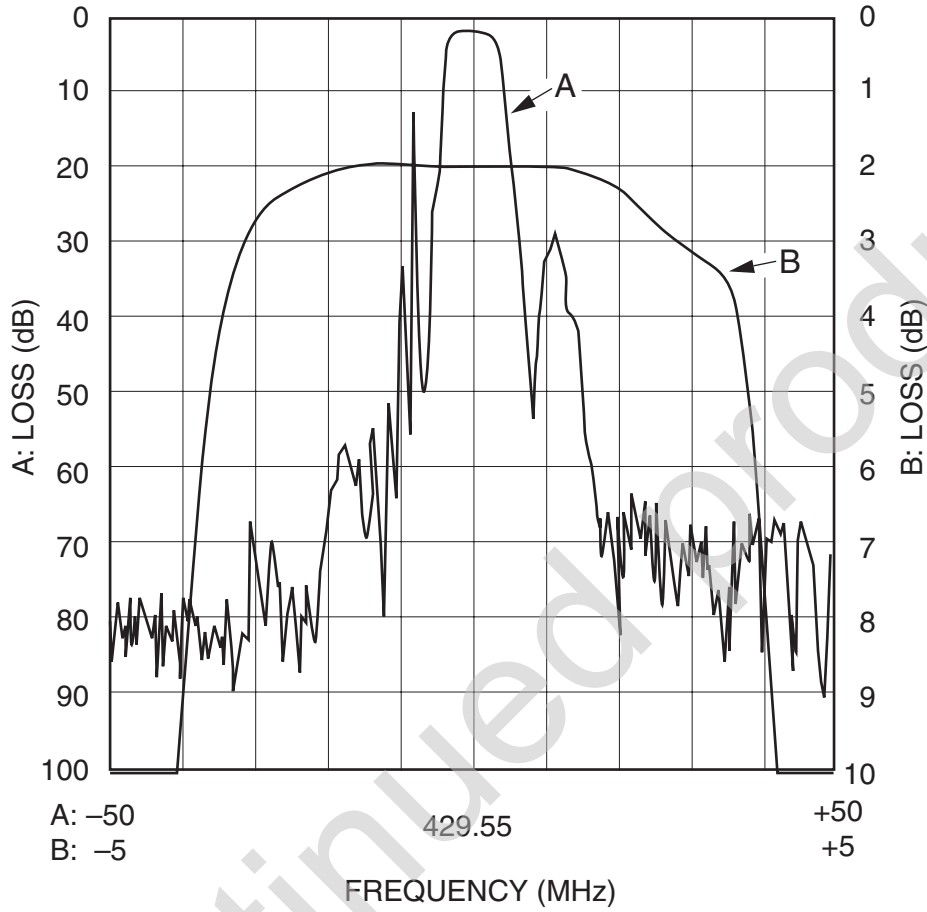
■ Footprint [Dimensions in mm]



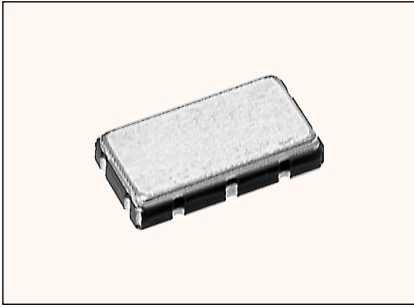
Surface Acoustic Wave Filter (SAW Filter)

TQS-830A-7R
429.55 MHz

■ Electrical Data



Surface Acoustic Wave Filter (SAW Filter)



TQS-843C-7R

Features

- Miniature size : 9.1(W) x 4.8(D) x 1.55(H)mm
- Low group delay distortion
- High selectivity

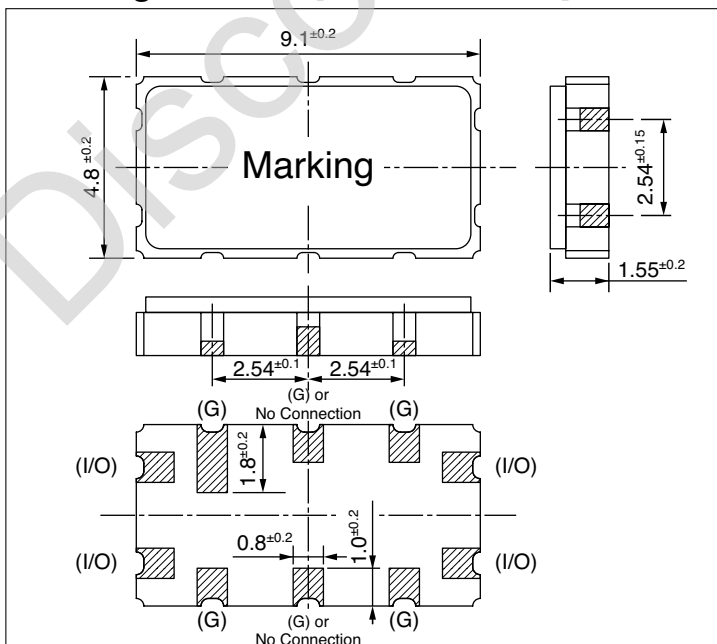
Application

- IF filter for Cellular Phone GSM system

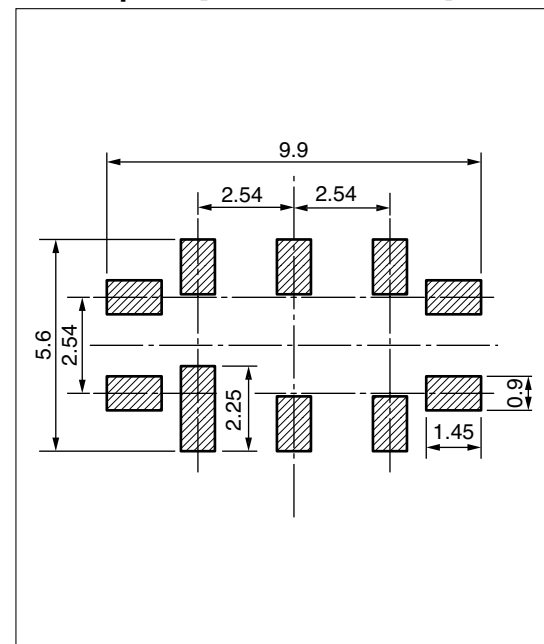
Specifications

Type	TQS-843C-7R
Nominal frequency (fo)	71 MHz
Pass band	fo ±80 kHz
Insertion loss	4.0 dB max.
Pass band ripple	1.5 dB max.
Group delay distortion	2.0 μs max.
Stop band attenuation	
fo ± 400 kHz	20 dB min.
fo ± 600 kHz	30 dB min.
fo ± 800 kHz	40 dB min.
fo ± 1.6 MHz	45 dB min.
Terminating impedance	1 kΩ // -2.2pF
Operating temperature range	-20 °C to +75 °C

Package Outlines [Dimensions in mm]



Footprint [Dimensions in mm]

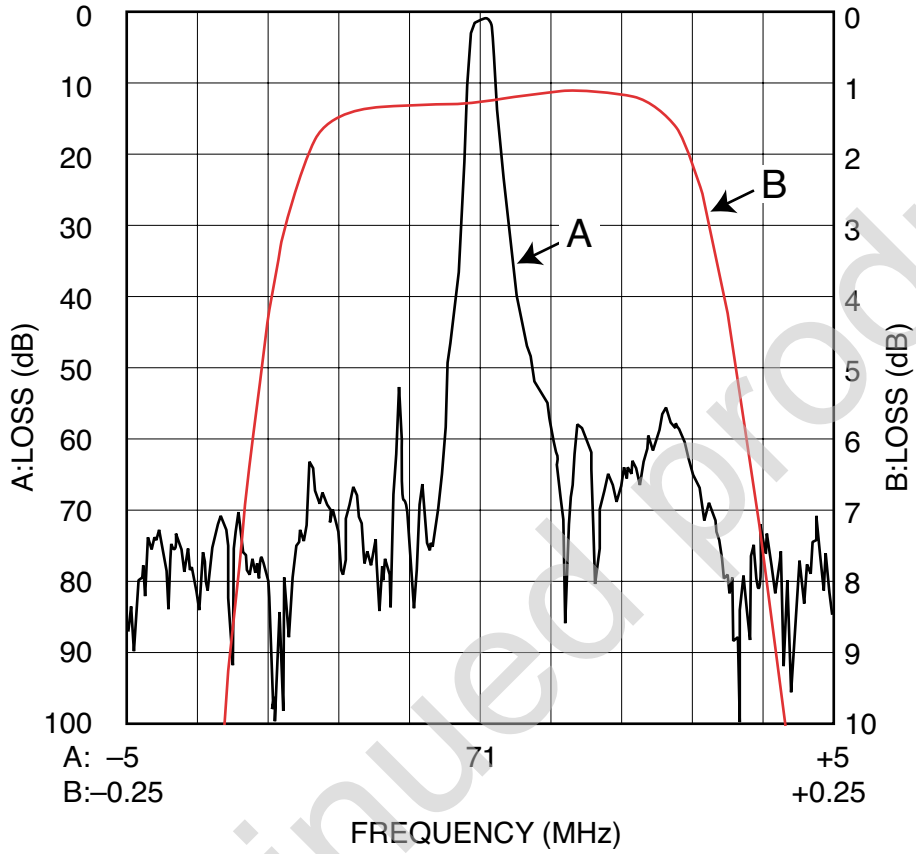


Surface Acoustic Wave Filter (SAW Filter)

IF Filter for Cellular Phone
GSM system

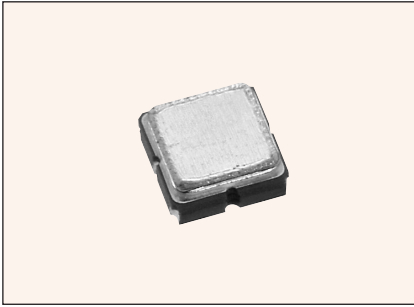
TQS-843C-7R
71 MHz

■ Electrical Data



Discontinued Product

Surface Acoustic Wave Filter (SAW Filter)



TQS-848A-7R

■ Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

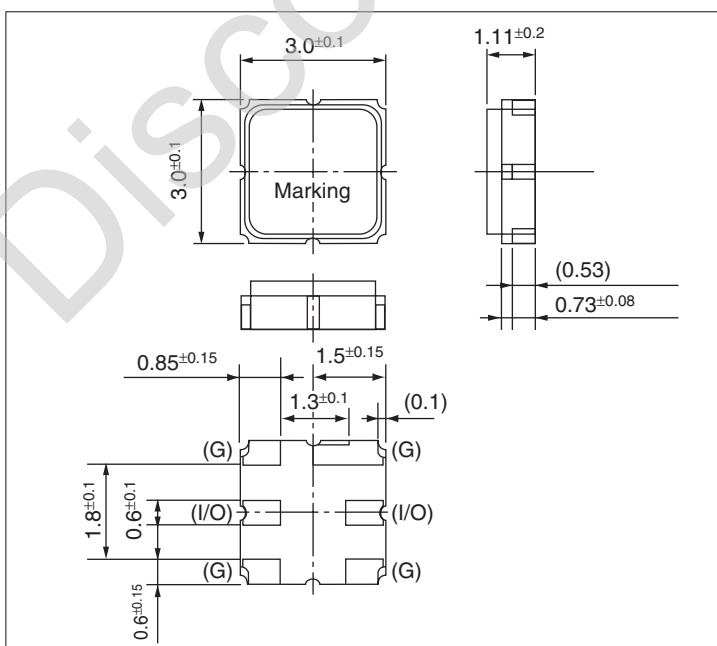
■ Application

- RF filter for Cellular Phone CDMA system (Rx)

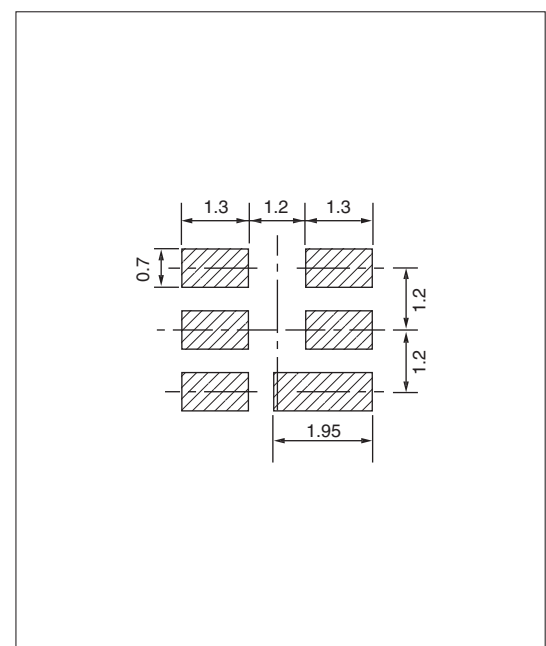
■ Specifications

Type	TQS-848A-7R
Nominal frequency	851 MHz
Pass band	832 to 870 MHz
Insertion loss	4.0 dB max.
Pass band ripple	2.0 dB max.
VSWR	3.0 max.
Stop band attenuation (Referred to through Level)	
612 to 650 MHz	50 dB min.
722 to 760 MHz	30 dB min.
887 to 925 MHz	10 dB min.
Terminating impedance	50 Ω
Operating temperature range	-20 °C to +75 °C

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]

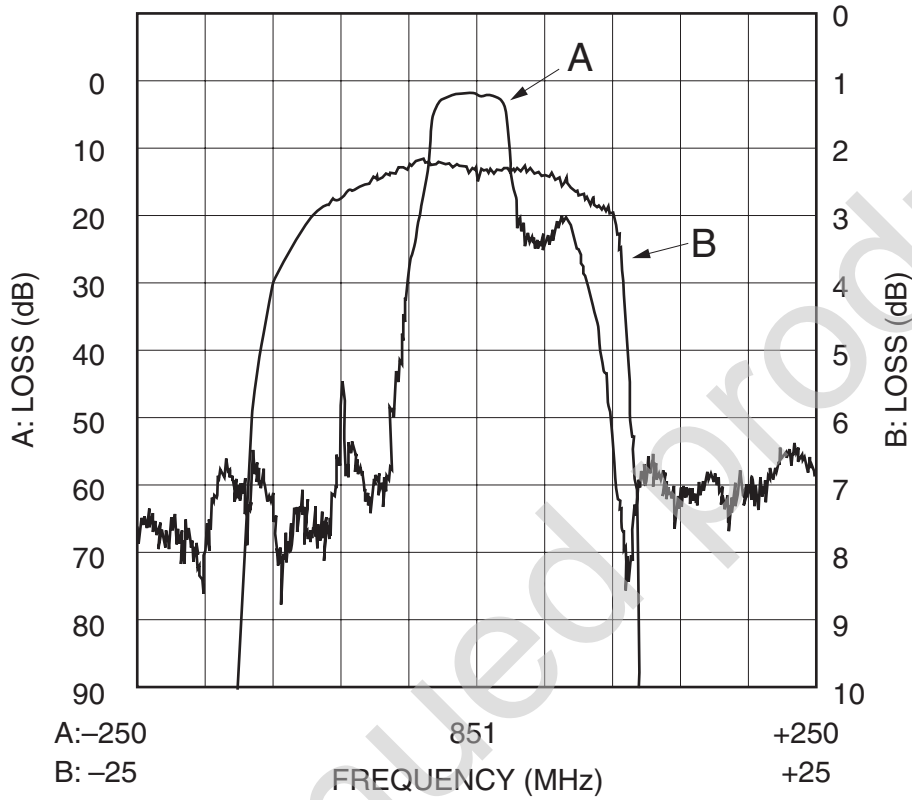


Surface Acoustic Wave Filter (SAW Filter)

RF Filter for Cellular Phone
CDMA system (Rx)

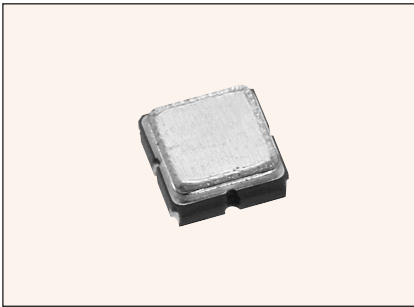
TQS-848A-7R
851 MHz

■ Electrical Data



Discontinued Product

Surface Acoustic Wave Filter (SAW Filter)



TQS-871A-7R

Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

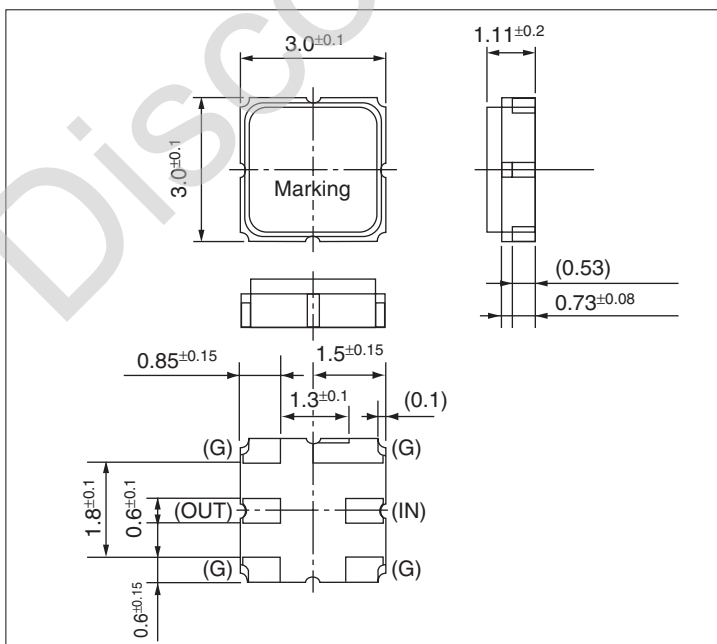
Application

- RF filter for Cellular Phone
AMPS / TDMA / CDMA system (Tx)

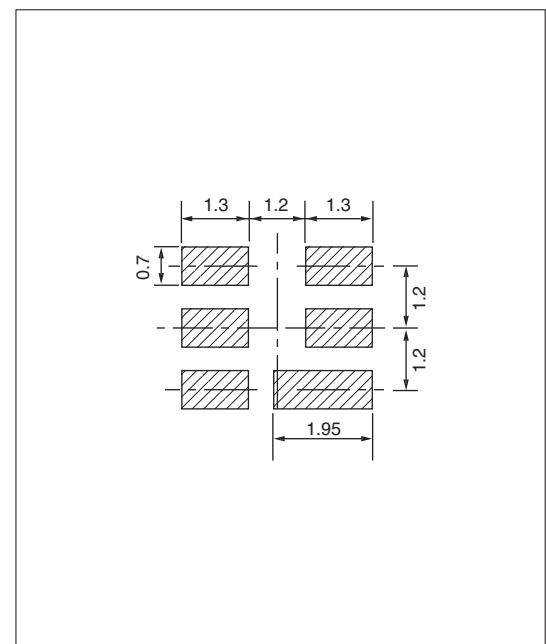
Specifications

Type	TQS-871A-7R
Nominal frequency	836.5 MHz
Pass band	824 to 849 MHz
Insertion loss	3.3 dB max.
Pass band ripple	1.5 dB max.
VSWR	2.0 max.
Stop band attenuation (Referred to through Level)	
DC to 804 MHz	40 dB min.
869 to 910 MHz	27 dB min.
910 to 1500 MHz	45 dB min.
1500 to 2000 MHz	35 dB min.
Terminating impedance	50 Ω
Operating temperature range	-30 °C to +85 °C

Package Outlines [Dimensions in mm]



Footprint [Dimensions in mm]

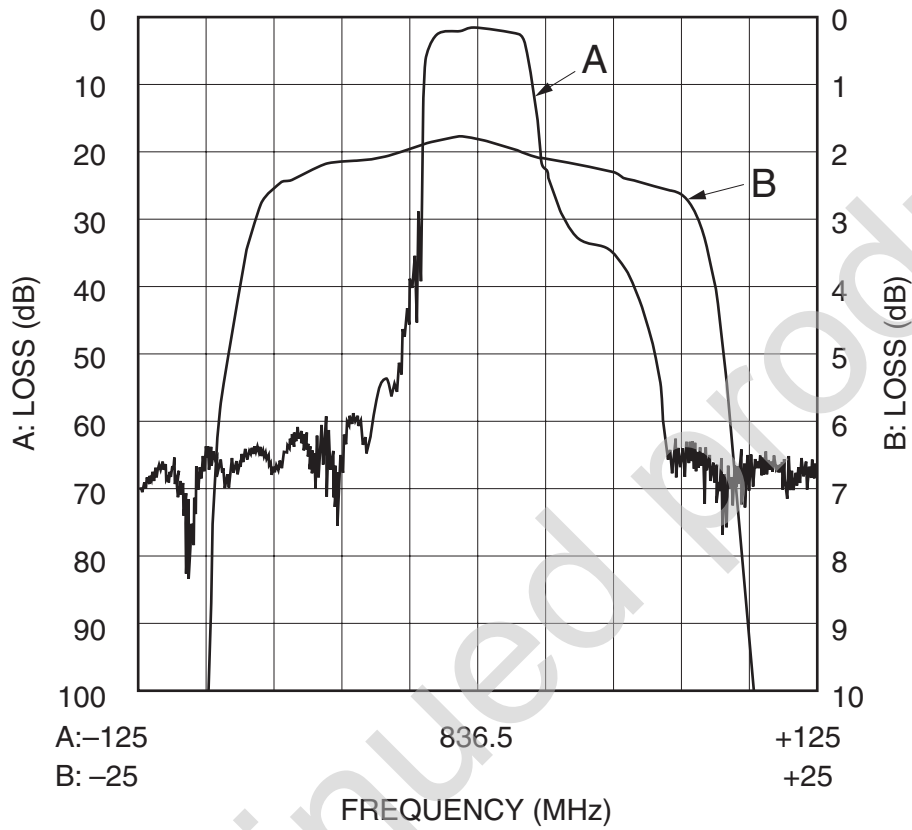


Surface Acoustic Wave Filter (SAW Filter)

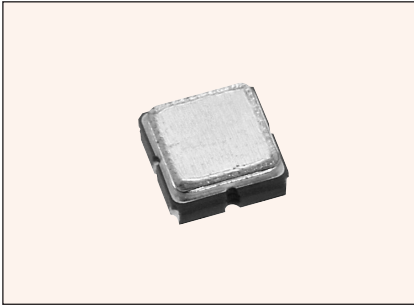
RF Filter for Cellular Phone
 AMPS / TDMA / CDMA system (Tx)

TQS-871A-7R
 836.5 MHz

■ Electrical Data



Surface Acoustic Wave Filter (SAW Filter)



TQS-872A-7R

■ Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

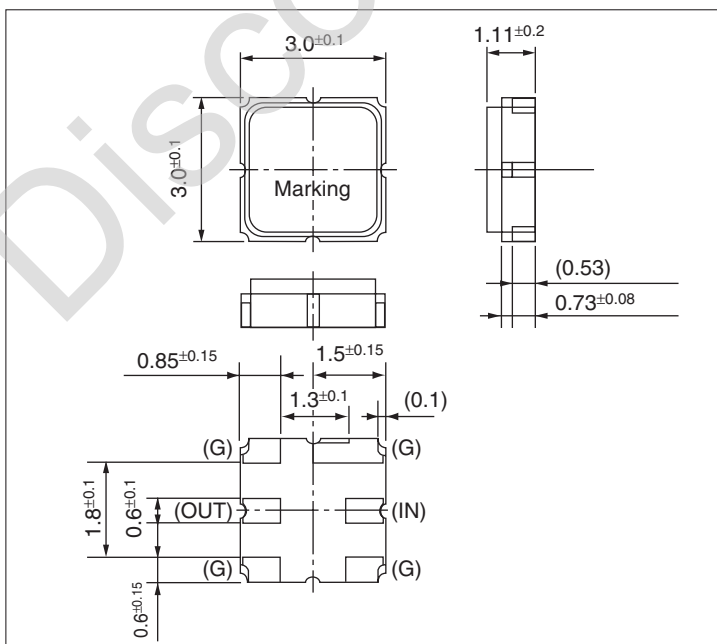
■ Application

- RF filter for Cellular Phone
AMPS / TDMA / CDMA system (Rx)

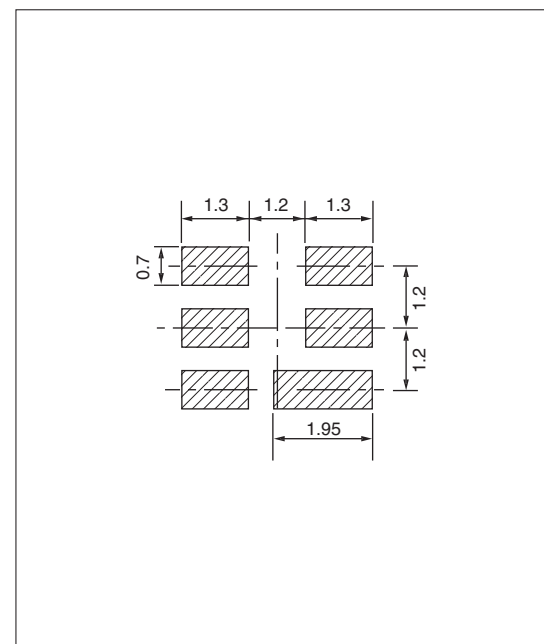
■ Specifications

Type	TQS-872A-7R
Nominal frequency	881.5 MHz
Pass band	869 to 894 MHz
Insertion loss	3.3 dB max.
Pass band ripple	1.5 dB max.
VSWR	2.0 max.
Stop band attenuation (Referred to through Level)	
DC to 824 MHz	45 dB min.
824 to 849 MHz	35 dB min.
914 to 954 MHz	25 dB min.
954 to 1065 MHz	55 dB min.
1500 to 2000 MHz	35 dB min.
Terminating impedance	50 Ω
Operating temperature range	-30 °C to +85 °C

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]

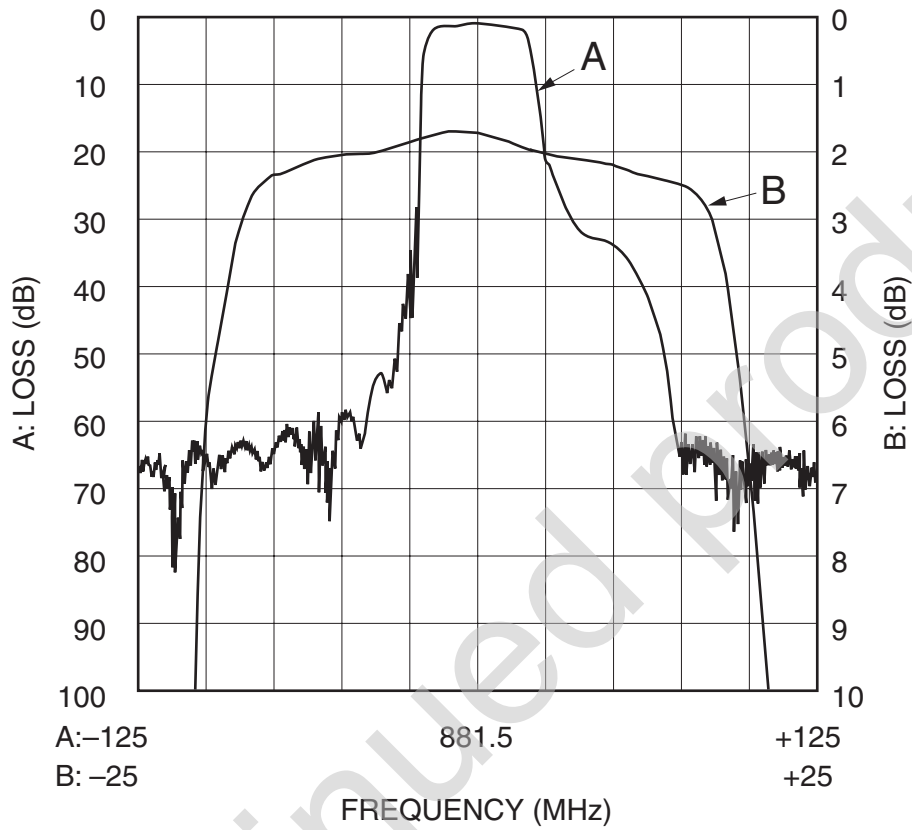


Surface Acoustic Wave Filter (SAW Filter)

RF Filter for Cellular Phone
 AMPS / TDMA / CDMA system (Rx)

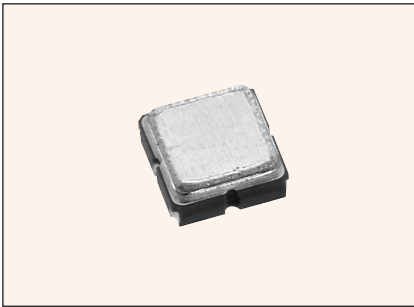
TQS-872A-7R
 881.5 MHz

■ Electrical Data



Discontinued Product

Surface Acoustic Wave Filter (SAW Filter)



TQS-873A-7R

■ Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

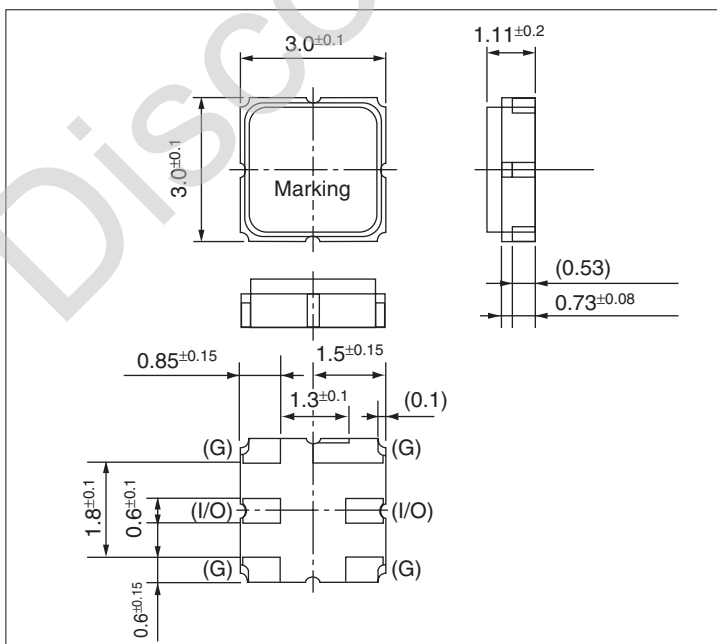
■ Application

- RF filter for Cellular Phone GSM system (Tx)

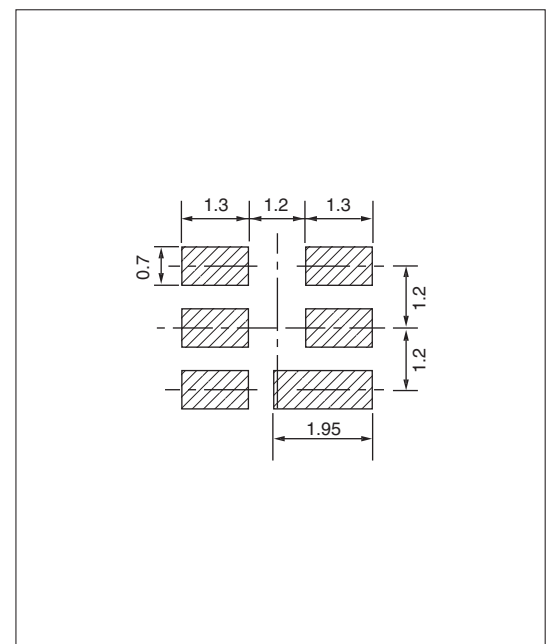
■ Specifications

Type	TQS-873A-7R
Nominal frequency	902.5 MHz
Pass band	890 to 915 MHz
Insertion loss	3.3 dB max.
Pass band ripple	1.7 dB max.
VSWR	2.0 max.
Stop band attenuation (Referred to through Level)	
DC to 870 MHz	35 dB min.
935 to 980 MHz	26 dB min.
980 to 1500 MHz	45 dB min.
1500 to 2000 MHz	35 dB min.
Terminating impedance	50 Ω
Operating temperature range	-20 °C to +75 °C

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]

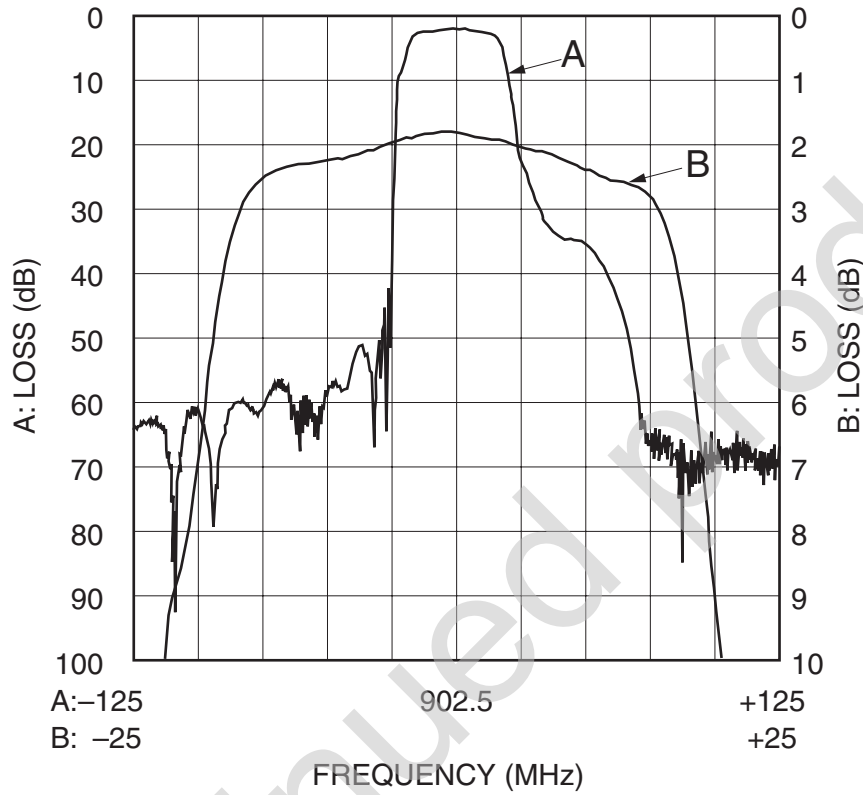


Surface Acoustic Wave Filter (SAW Filter)

RF Filter for Cellular Phone
GSM system (Tx)

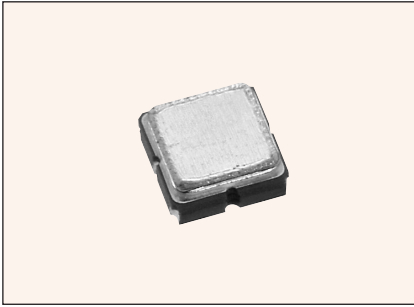
TQS-873A-7R
902.5 MHz

■ Electrical Data



Discontinued Product

Surface Acoustic Wave Filter (SAW Filter)



TQS-874A-7R

■ Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

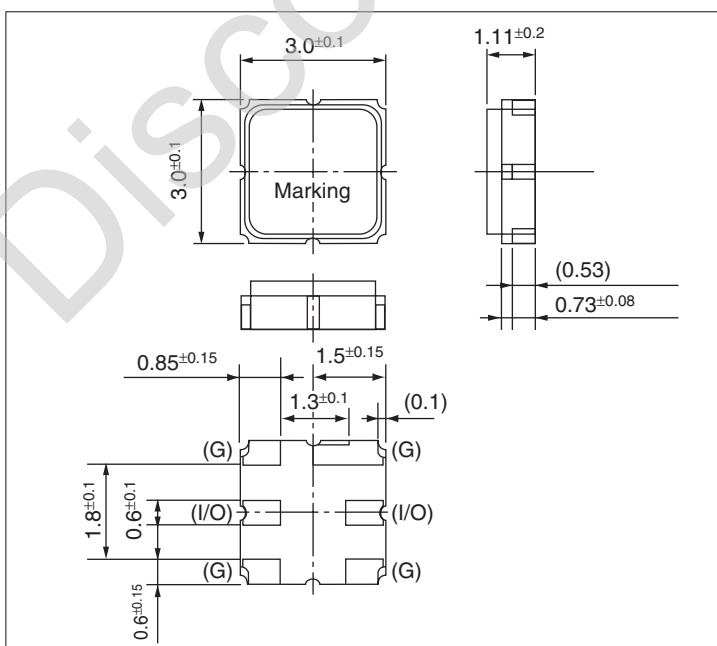
■ Application

- RF filter for Cellular Phone GSM system (Rx)

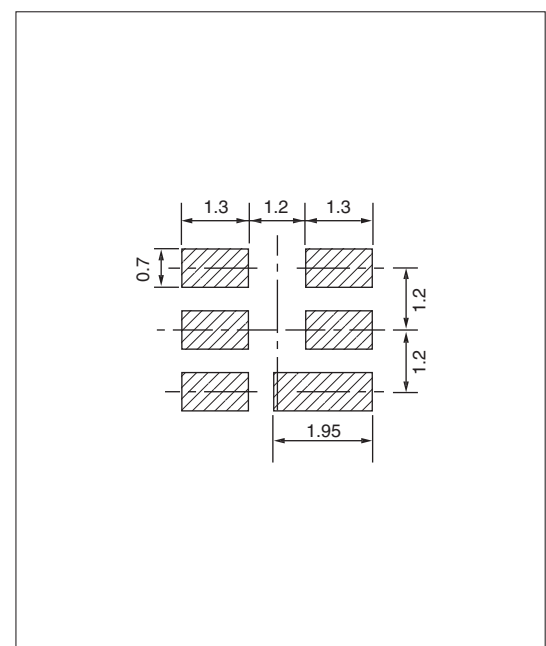
■ Specifications

Type	TQS-874A-7R
Nominal frequency	947.5 MHz
Pass band	935 to 960 MHz
Insertion loss	3.3 dB max.
Pass band ripple	1.7 dB max.
VSWR	2.0 max.
Stop band attenuation (Referred to through Level)	
DC to 915 MHz	35 dB min.
980 to 1005 MHz	20 dB min.
1005 to 1800 MHz	45 dB min.
Terminating impedance	50 Ω
Operating temperature range	-20 °C to +75 °C

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]

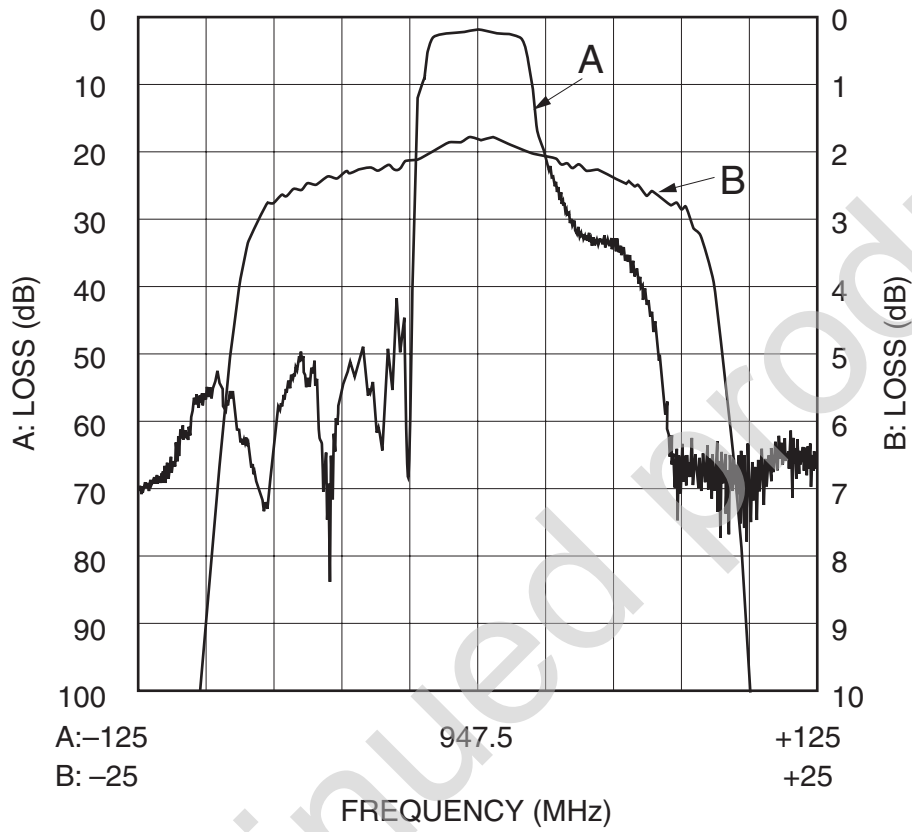


Surface Acoustic Wave Filter (SAW Filter)

RF Filter for Cellular Phone
GSM system (Rx)

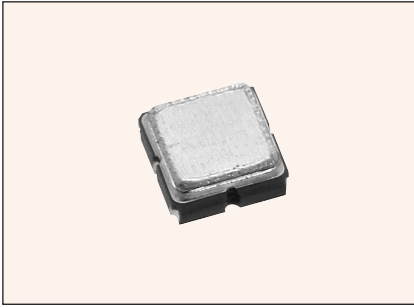
TQS-874A-7R
947.5 MHz

■ Electrical Data



Discontinued Product

Surface Acoustic Wave Filter (SAW Filter)



TQS-878A-7R

■ Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity
- Balanced Output

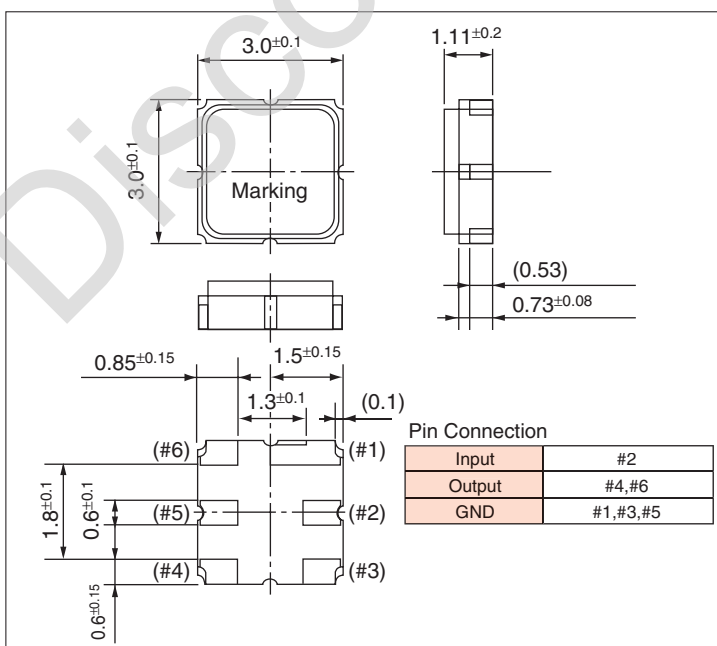
■ Application

- RF filter for Cellular Phone
AMPS / TDMA / CDMA system (Rx)

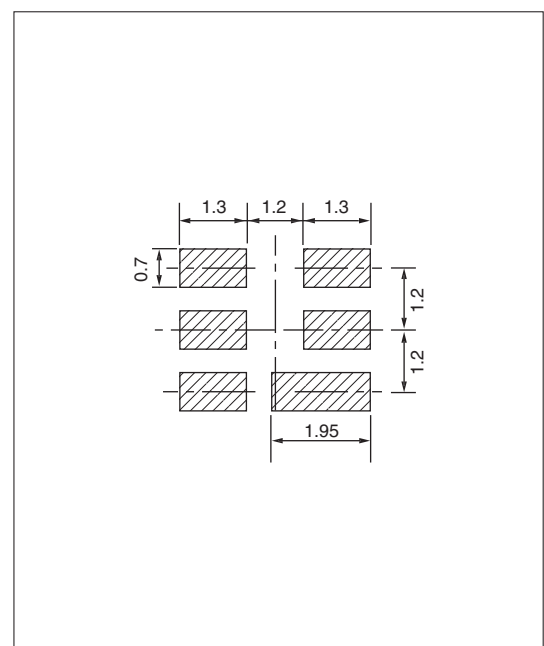
■ Specifications

Type	TQS-878A-7R
Nominal frequency	881.5 MHz
Pass band	869 to 894 MHz
Insertion loss	3.3 dB max.
Pass band ripple	1.5 dB max.
VSWR	2.0 max.
Stop band attenuation (Referred to through Level)	
DC to 824 MHz	45 dB min.
824 to 849 MHz	40 dB min.
914 to 954 MHz	25 dB min.
954 to 1500 MHz	55 dB min.
1500 to 3000 MHz	40 dB min.
Terminating impedance	Input : Unbalanced 50 Ω Output : Balanced 200 Ω
Operating temperature range	-30 °C to +85 °C

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]

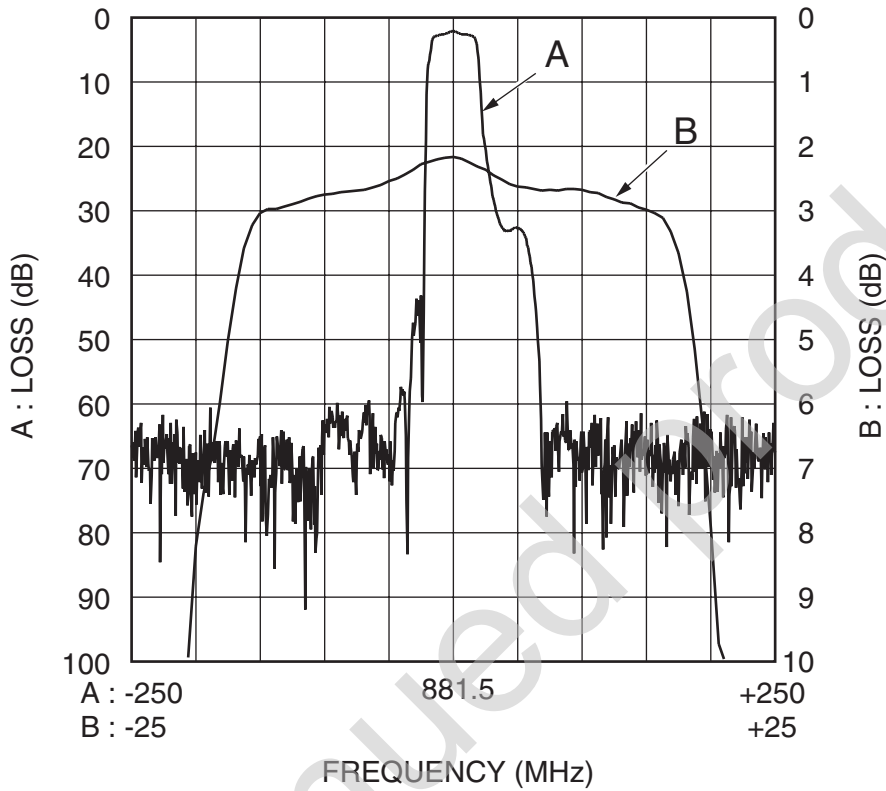


Surface Acoustic Wave Filter (SAW Filter)

RF Filter (Balanced Output) for Cellular Phone
 AMPS / TDMA / CDMA system (Rx)

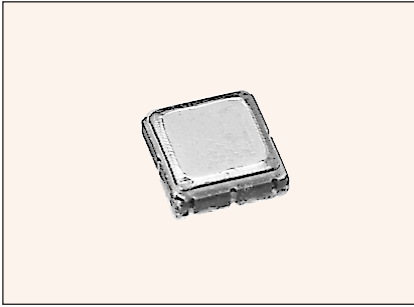
TQS-878A-7R
 881.5 MHz

■ Electrical Data



Discontinued Product

Surface Acoustic Wave Filter (SAW Filter)



TQS-879A-7R

■ Features

- Ultra miniature size : 3.8(W) x 3.8(D) x 1.25(H)mm
- High selectivity

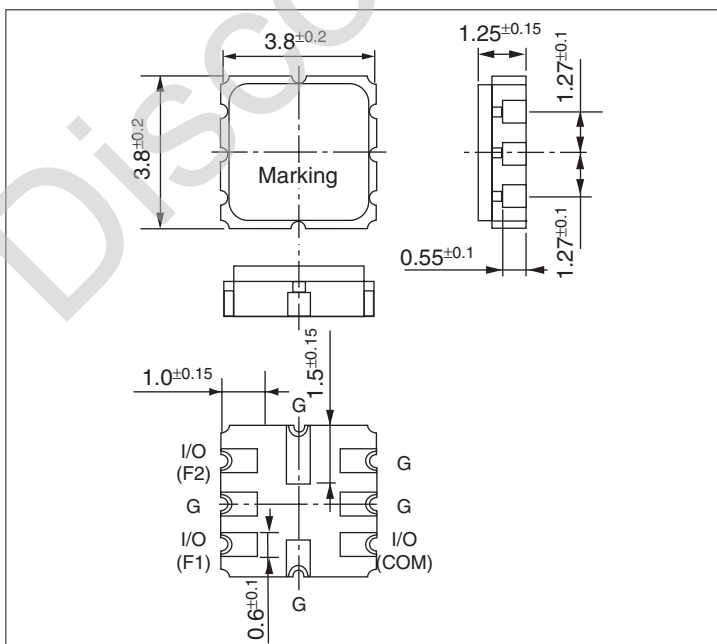
■ Application

- Cordless Telephone (US)

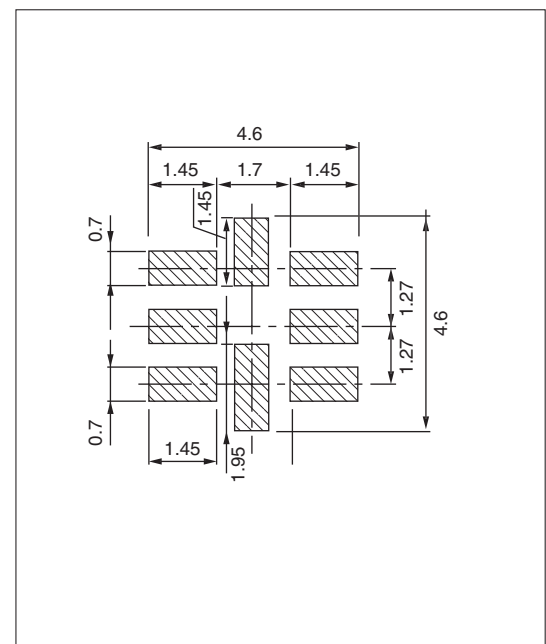
■ Specifications

Type	TQS-879A-7R	
Nominal frequency [fo]	903.5 MHz (f1)	926.5 MHz (f2)
Pass band	902.5 to 904.5 MHz	925.5 to 927.5 MHz
Insertion loss	3.5 dB max.	
Stop band attenuation		
fo-80MHz to fo-40MHz	35 dB min.	35 dB min.
fo-40MHz to fo-22MHz (fo=926.5MHz)	-	25 dB min.
fo+22MHz to fo+40MHz (fo=903.5MHz)	25 dB min.	-
fo+60MHz to fo+100MHz	40 dB min.	40 dB min.
Terminating impedance	50 Ω	
Operating temperature range	-10 °C to +50 °C	

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]



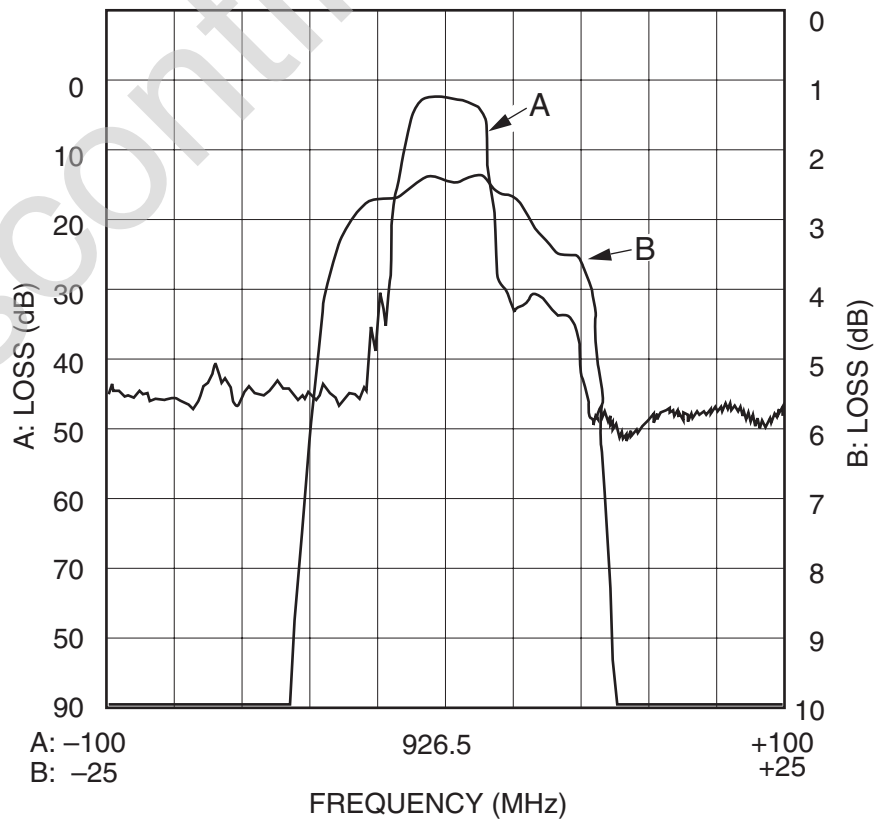
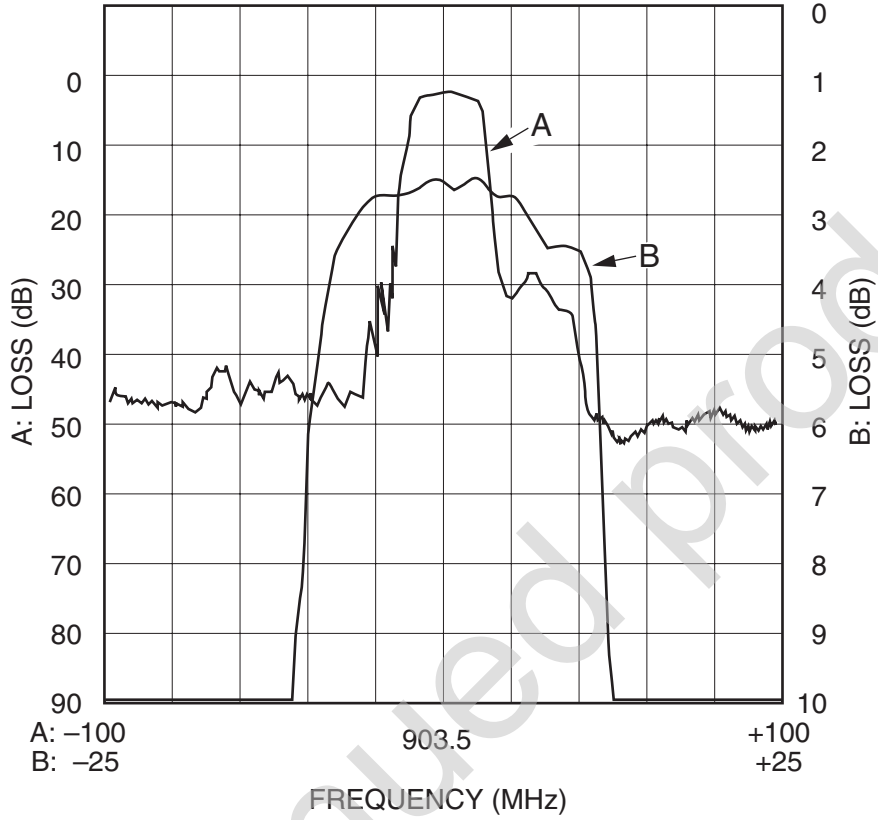
Surface Acoustic Wave Filter (SAW Filter)

TQS-879A-7R

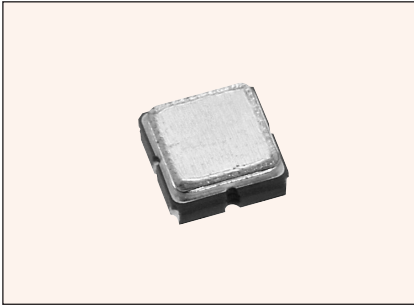
For Cordless Telephone (US)

903.5 MHz, 926.5 MHz

Electrical Data



Surface Acoustic Wave Filter (SAW Filter)



TQS-889A-7R

Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity
- Balanced Output

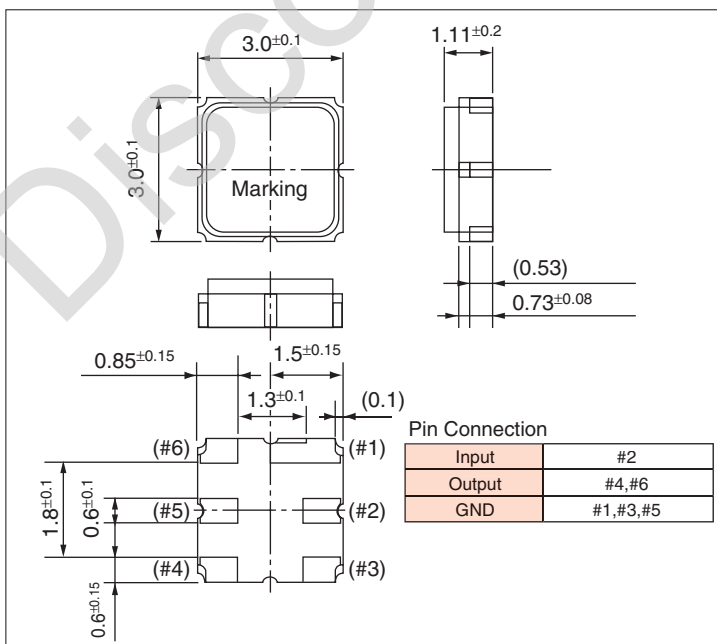
Application

- RF filter for Cellular Phone
AMPS / TDMA / CDMA / GSM system (Rx)

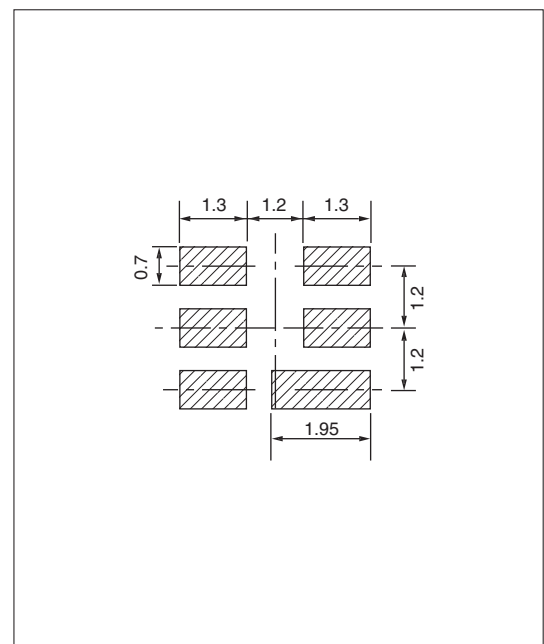
Specifications

Type	TQS-889A-7R
Nominal frequency	881.5 MHz
Pass band	869 to 894 MHz
Insertion loss	3.2 dB max.
Pass band ripple	1.5 dB max.
VSWR	2.0 max.
Stop band attenuation (Referred to through Level)	
DC to 824 MHz	45 dB min.
824 to 849 MHz	40 dB min.
914 to 954 MHz	25 dB min.
954 to 3000 MHz	45 dB min.
Terminating impedance	Input : Unbalanced 50 Ω Output : Balanced 100 Ω
Operating temperature range	-30 °C to +85 °C

Package Outlines [Dimensions in mm]



Footprint [Dimensions in mm]

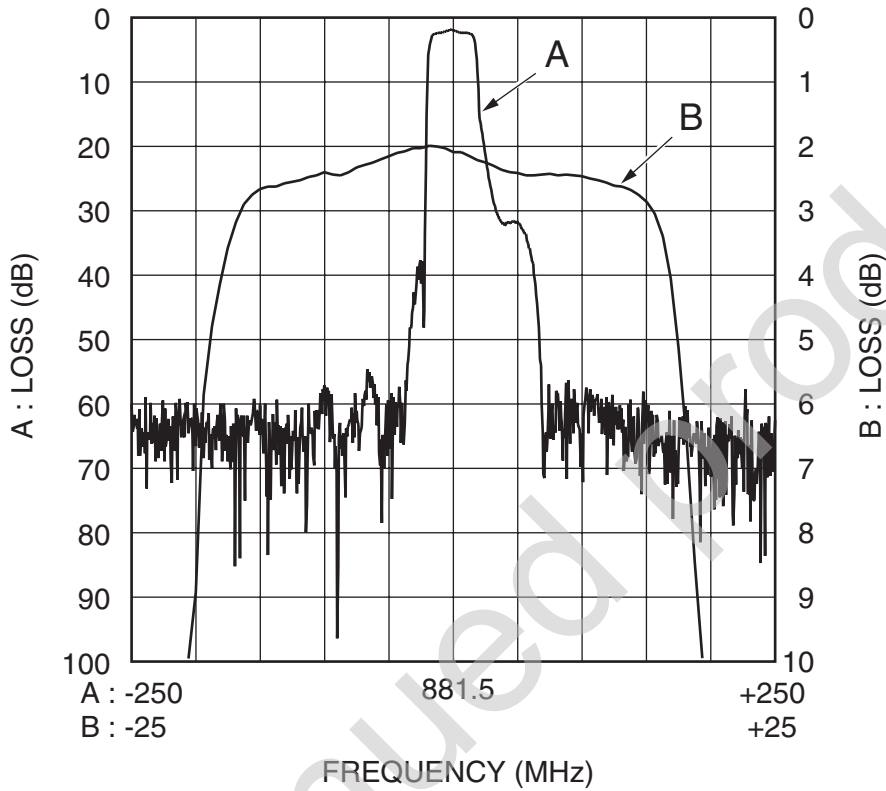


Surface Acoustic Wave Filter (SAW Filter)

RF Filter (Balanced Output) for Cellular Phone
 AMPS / TDMA / CDMA / GSM system (Rx)

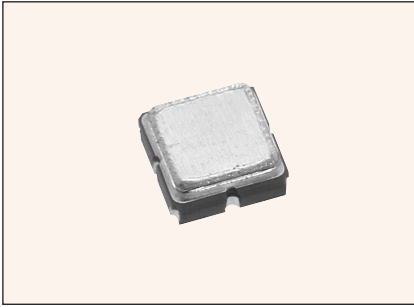
TQS-889A-7R
 881.5 MHz

■ Electrical Data



Discontinued Product

Surface Acoustic Wave Filter (SAW Filter)



TQS-890A-7R

■ Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

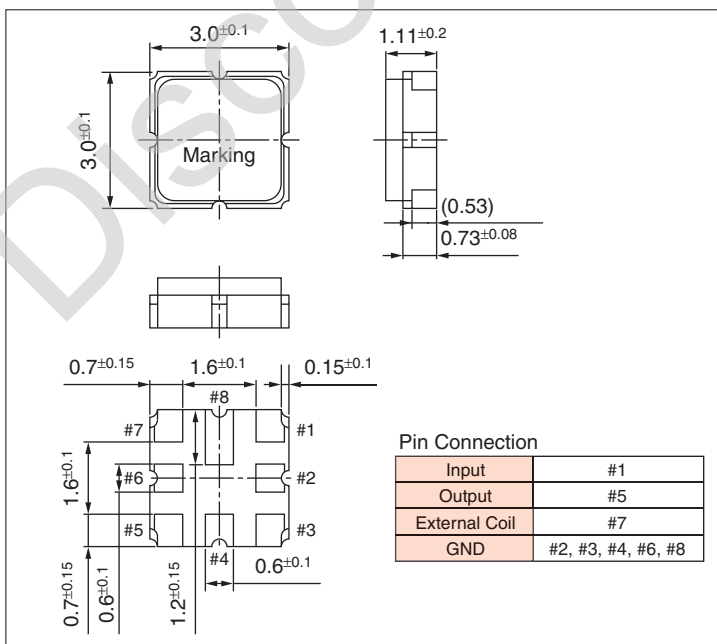
■ Application

- RF filter for Cellular Phone CDMA system (Tx)

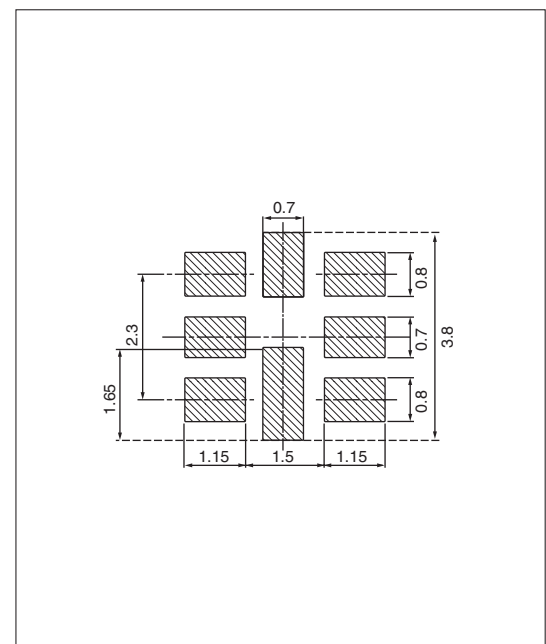
■ Specifications

Type	TQS-890A-7R
Nominal frequency	906 MHz
Pass band	887 to 925 MHz
Insertion loss	4.0 dB max.
Pass band ripple	2.2 dB max.
VSWR	2.5 max.
Stop band attenuation (Referred to through Level)	
DC to 761 MHz	45 dB min.
761 to 870 MHz	40 dB min.
1051 to 1850 MHz	40 dB min.
1850 to 3000 MHz	15 dB min.
Terminating impedance	Input : 50 Ω , Output : 50 Ω External coil : 6.8nH
Operating temperature range)	-20 °C to +75 °C

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]

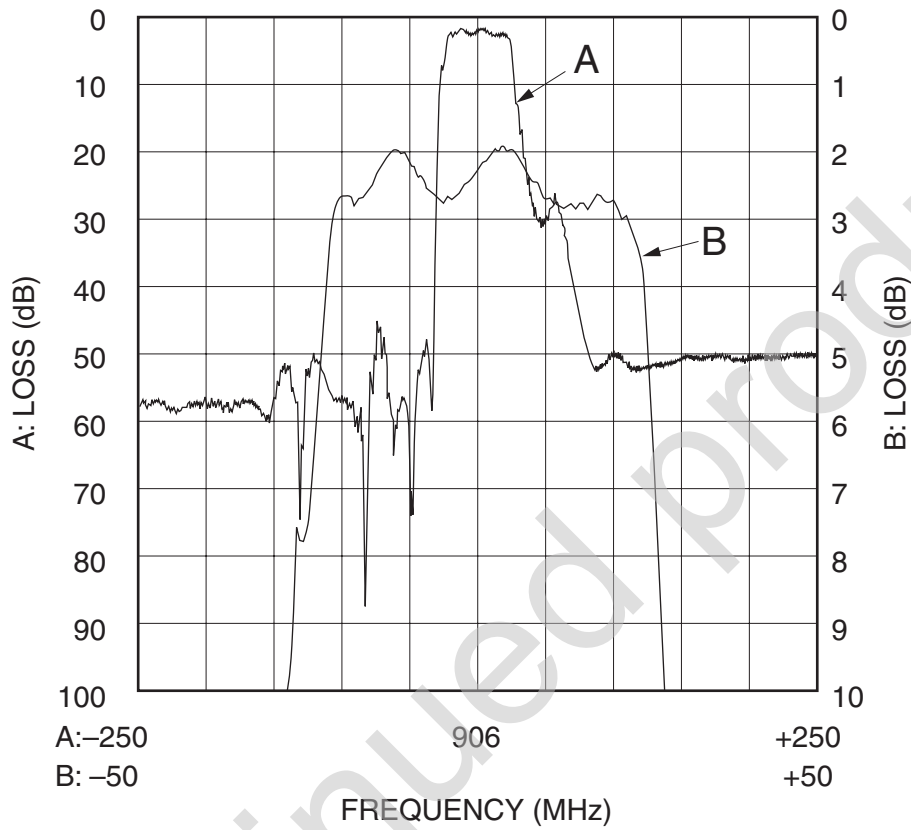


Surface Acoustic Wave Filter (SAW Filter)

RF Filter for Cellular Phone
CDMA system (Tx)

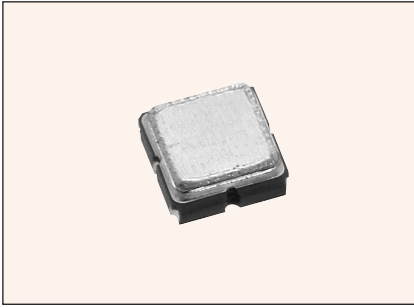
TQS-890A-7R
906 MHz

■ Electrical Data



Discontinued Lead product

Surface Acoustic Wave Filter (SAW Filter)



TQS-894A-7R

Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

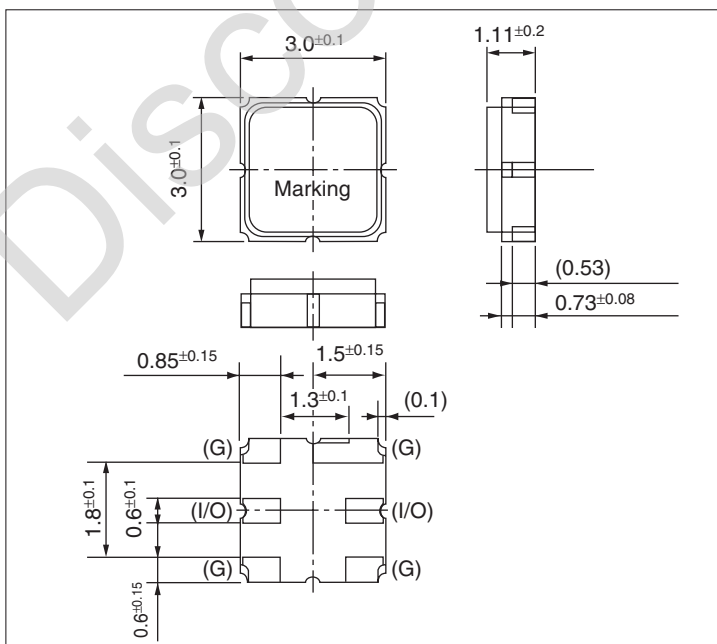
Application

- RF filter for Cellular Phone
AMPS / TDMA / CDMA system (Tx)

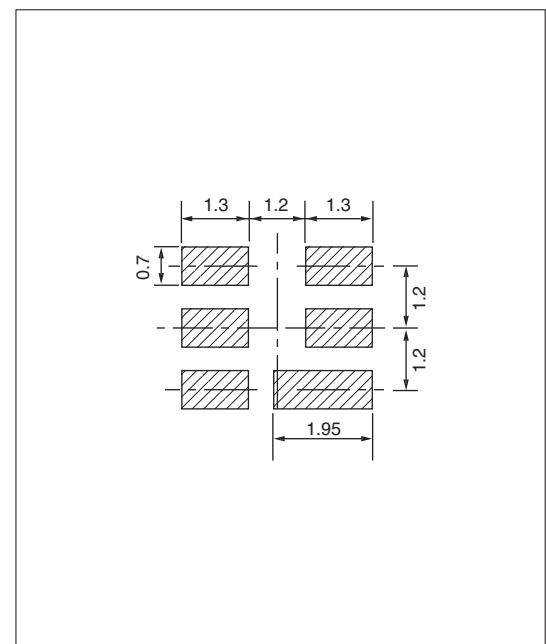
Specifications

Type	TQS-894A-7R
Nominal frequency	836.5 MHz
Pass band	824 to 849 MHz
Insertion loss	3.8 dB max.
Pass band ripple	1.8 dB max.
VSWR	2.2 max.
Stop band attenuation (Referred to through Level)	
DC to 804 MHz	40 dB min.
869 to 910 MHz	37 dB min.
910 to 1500 MHz	45 dB min.
1500 to 2000 MHz	35 dB min.
Terminating impedance	50 Ω
Operating temperature range	-30 °C to +85 °C

Package Outlines [Dimensions in mm]



Footprint [Dimensions in mm]

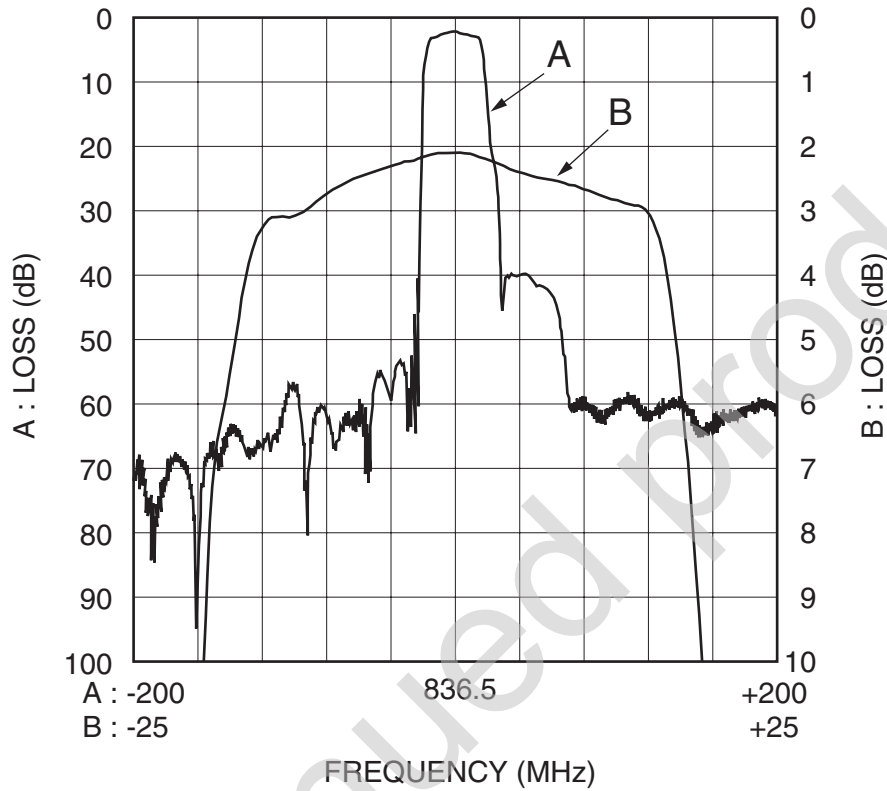


Surface Acoustic Wave Filter (SAW Filter)

RF Filter for Cellular Phone
 AMPS / TDMA / CDMA system (Tx)

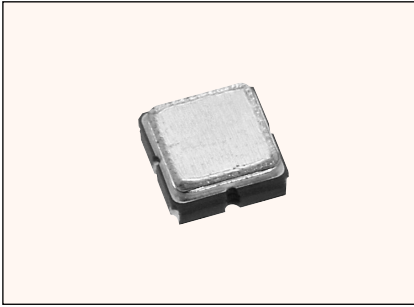
TQS-894A-7R
 836.5 MHz

■ Electrical Data



Discontinued Product

Surface Acoustic Wave Filter (SAW Filter)



TQS-895B-7R

Features

- Miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High Selectivity

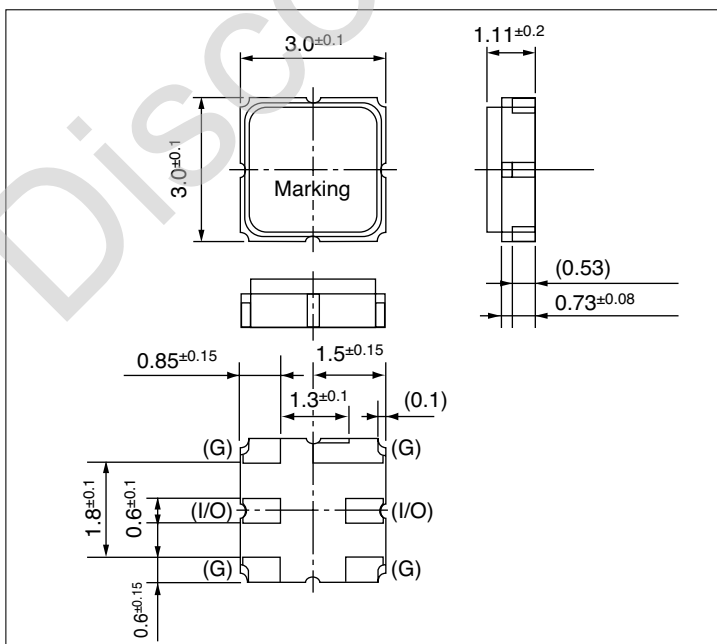
Application

- RF filter for Cellular Phone E-GSM system (Rx)

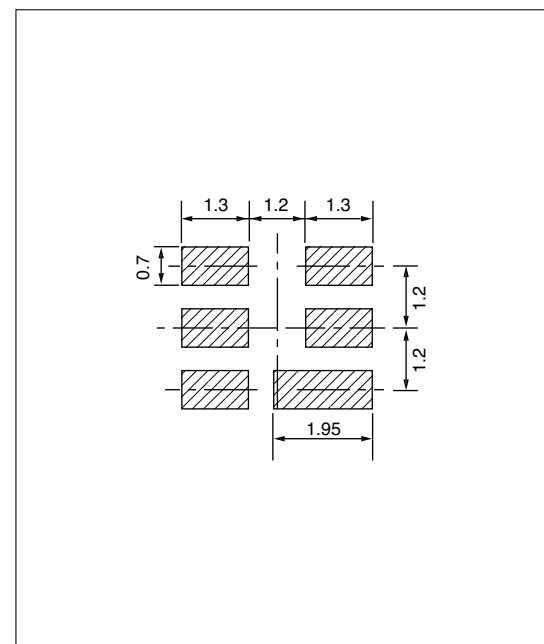
Specifications

Type	TQS-895B-7G
Nominal frequency	942.5 MHz
Pass band	925 to 960 MHz
Insertion loss	2.7 dB max.
Pass band ripple	1.5 dB max.
VSWR	2.0 max.
Stop band attenuation (Referred to through Level)	
DC to 880 MHz	45 dB min.
880 to 915 MHz	20 dB min.
980 to 1100 MHz	25 dB min.
1100 to 1500 MHz	40 dB min.
1500 to 2000 MHz	30 dB min.
Terminating impedance	50 Ω
Operating temperature range	-20 °C to +75 °C

Package Outlines [Dimensions in mm]



Footprint [Dimensions in mm]

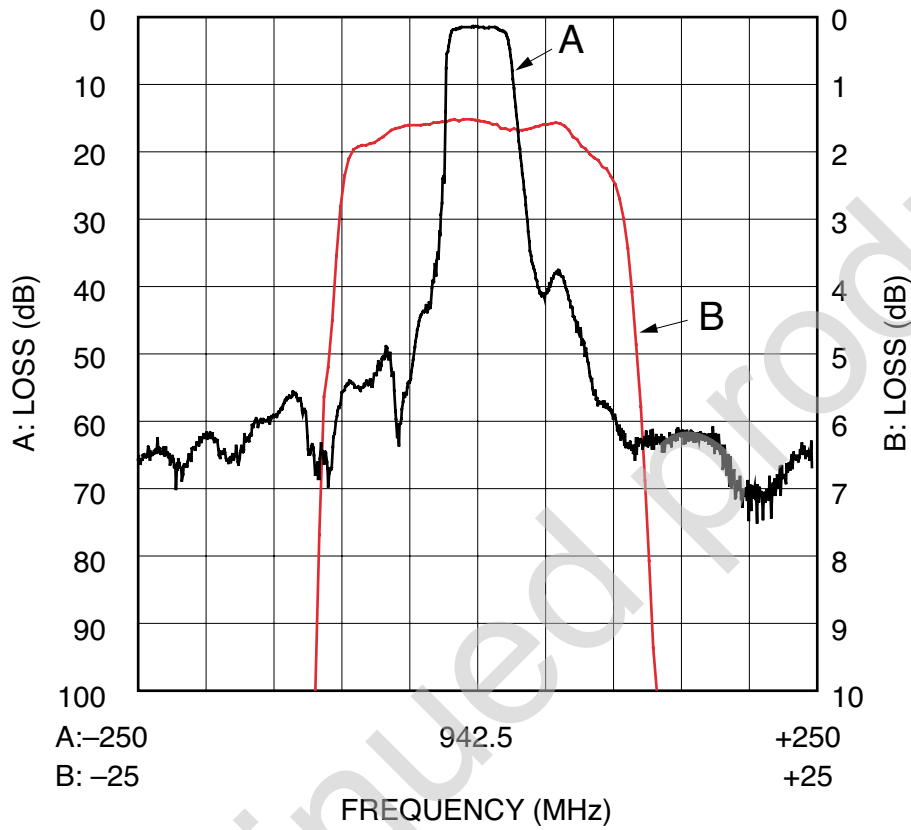


Surface Acoustic Wave Filter (SAW Filter)

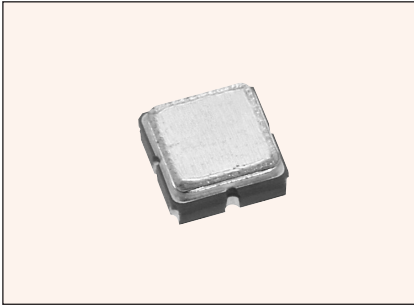
RF Filter for Cellular Phone
E-GSM system (Rx)

TQS-895B-7R
942.5 MHz

■ Electrical Data



Surface Acoustic Wave Filter (SAW Filter)



TQS-896A-7R

Features

- Ultra miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

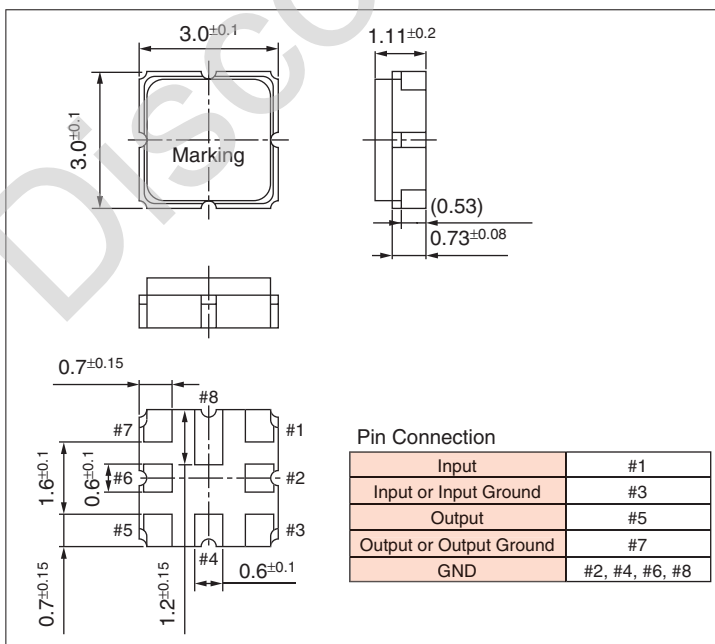
Application

- IF filter for Cellular Phone W-CDMA system (Tx)

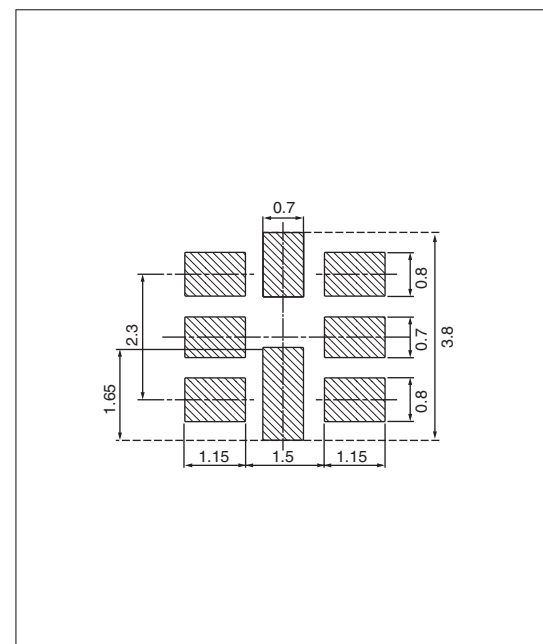
Specifications

Type	TQS-896A-7R
Nominal frequency (fo)	380 MHz
Pass band	fo ±2.048 MHz min.
Insertion loss	5.0 dB max.
Group delay distortion	100 ns max.
Stop band attenuation fo -10 MHz fo +10 MHz	30 dB min. 17 dB min.
Terminating impedance	240 Ω // -0.7pF
Operating temperature range	-20 °C to +75 °C

Package Outlines [Dimensions in mm]



Footprint [Dimensions in mm]

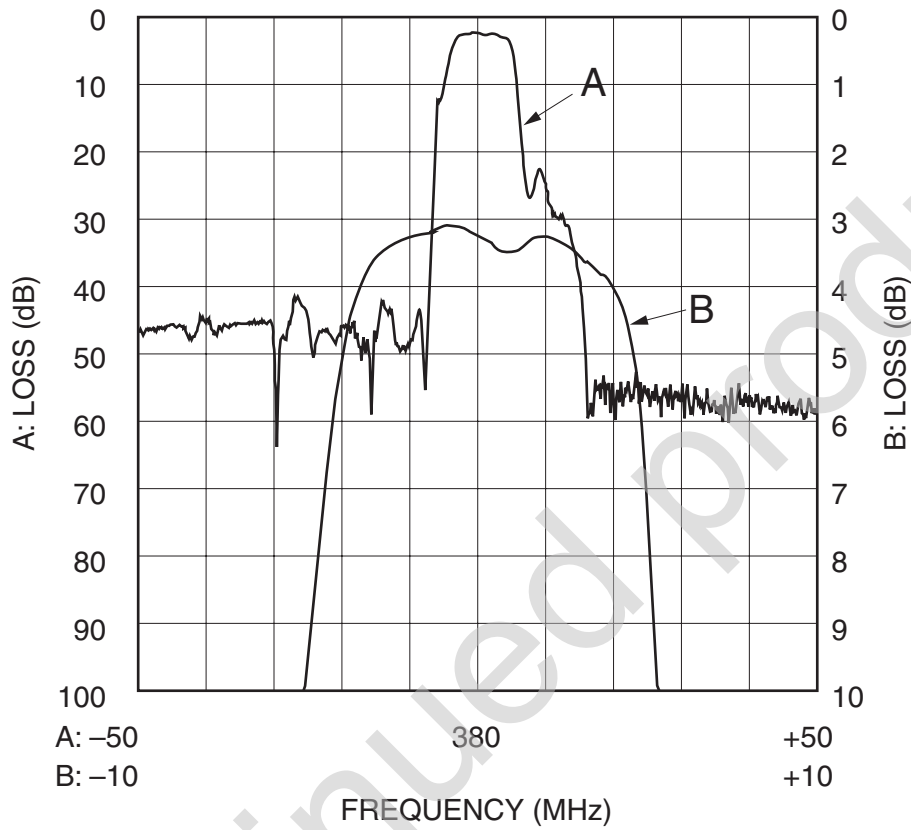


Surface Acoustic Wave Filter (SAW Filter)

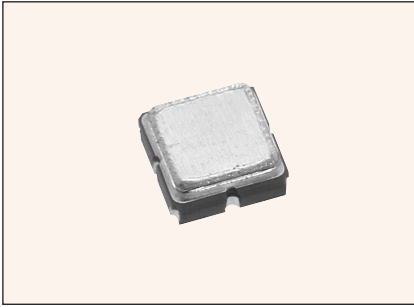
IF Filter for Cellular Phone
W-CDMA system (Tx)

TQS-896A-7R
380 MHz

■ Electrical Data



Surface Acoustic Wave Filter (SAW Filter)



TQS-899A-7R

■ Features

- Ultra miniature size : 3.0(W) x 3.0(D) x 1.1(H)mm
- High selectivity

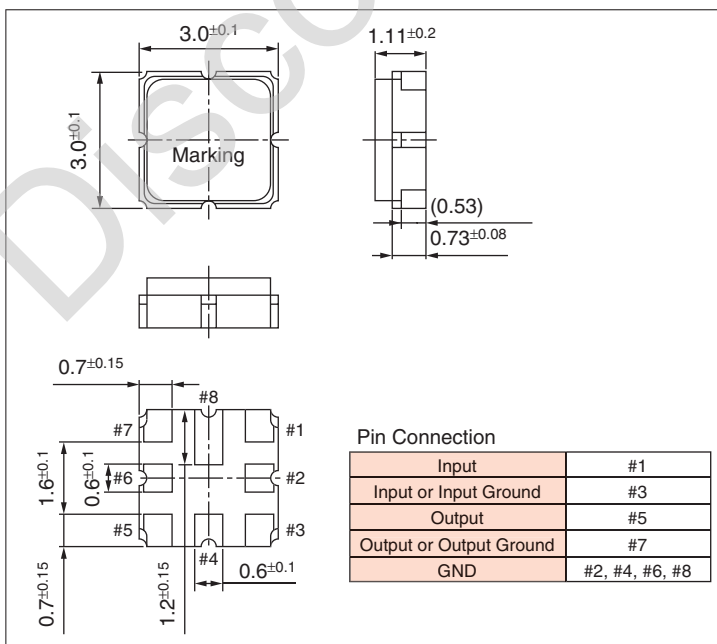
■ Application

- IF filter for Cellular Phone W-CDMA system (Tx)

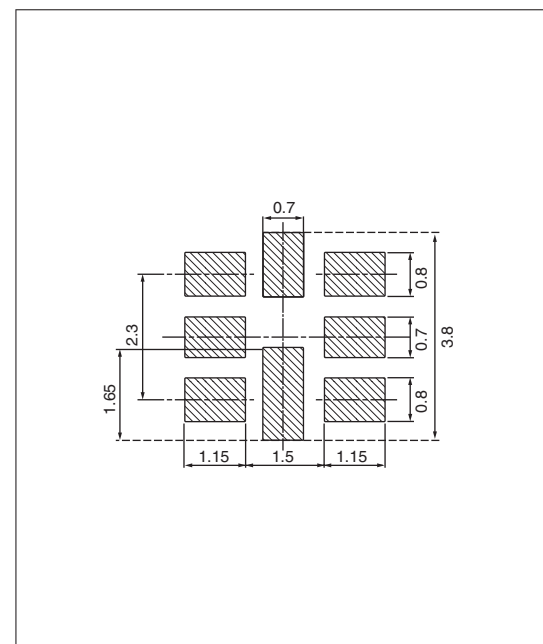
■ Specifications

Type	TQS-899A-7R
Nominal frequency (fo)	570 MHz
Pass band	fo ±2.5 MHz min.
Insertion loss	5.0 dB max.
Group delay distortion	100 ns max.
Stop band attenuation fo -10 MHz fo +10 MHz	10 dB min. 10 dB min.
Terminating impedance	150 Ω // -0.9pF
Operating temperature range	-20 °C to +75 °C

■ Package Outlines [Dimensions in mm]



■ Footprint [Dimensions in mm]

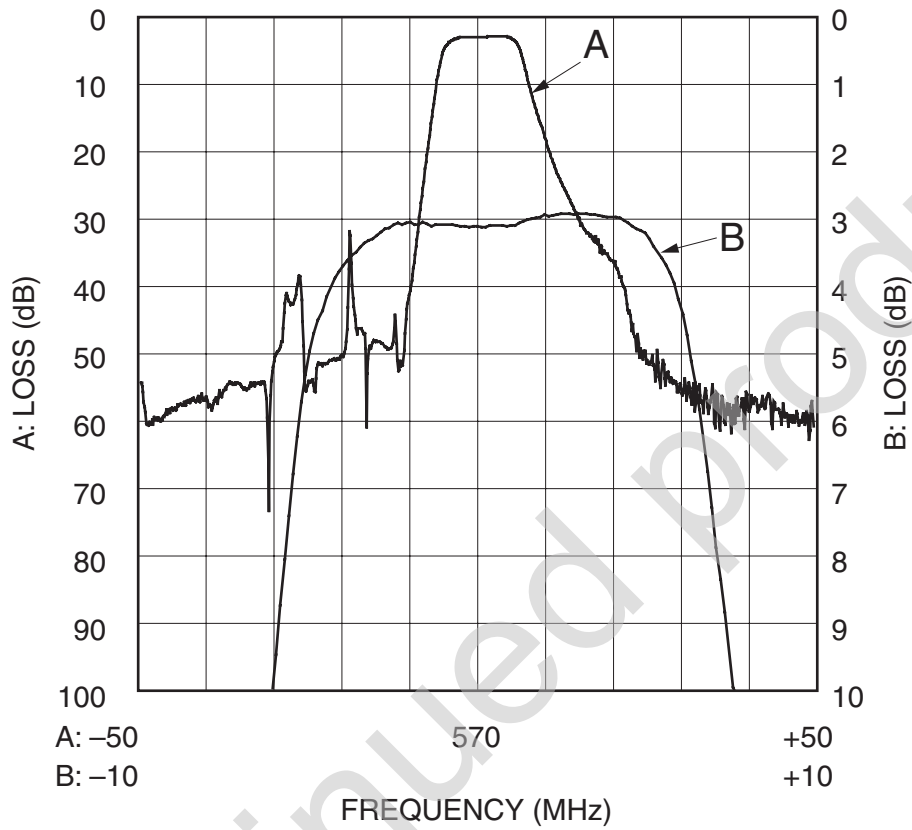


Surface Acoustic Wave Filter (SAW Filter)

IF Filter for Cellular Phone
W-CDMA system (Tx)

TQS-899A-7R
570 MHz

■ Electrical Data



Discontinued product