



Siemens Matsushita Components

# Microwave Ceramics

RF Filters for DECT Standard  
SC 1.89 Standard/Mini/Low-Loss





**Application**

- RF filter for DECT standard (Digital European Cordless Telephone)

**Construction**

- SMD filter consisting of coupled resonators
- Ceramic material: (NdBa)TiO<sub>3</sub> with a coating of copper and tin

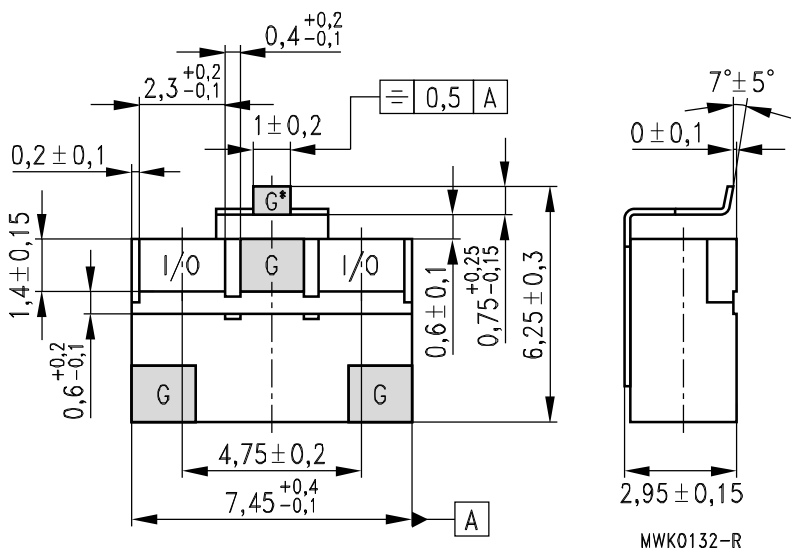
**Features**

- Small size due to ceramics with high permittivity ( $\epsilon_r = 88$ )
- Low insertion loss and high temperature stability ( $TC_f = 0 \pm 10$  ppm/K)
- High attenuation of 1st and 2nd harmonic

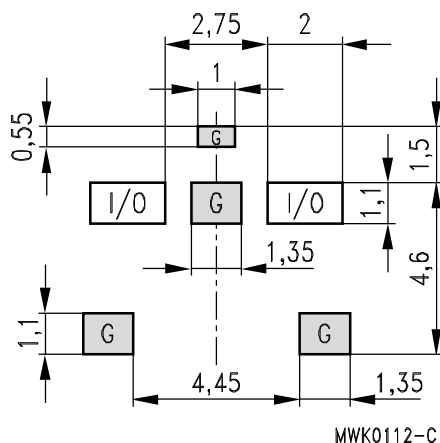
**Ordering code**

- B69812-N1897-B720

**Component drawing**



**Recommended footprint**



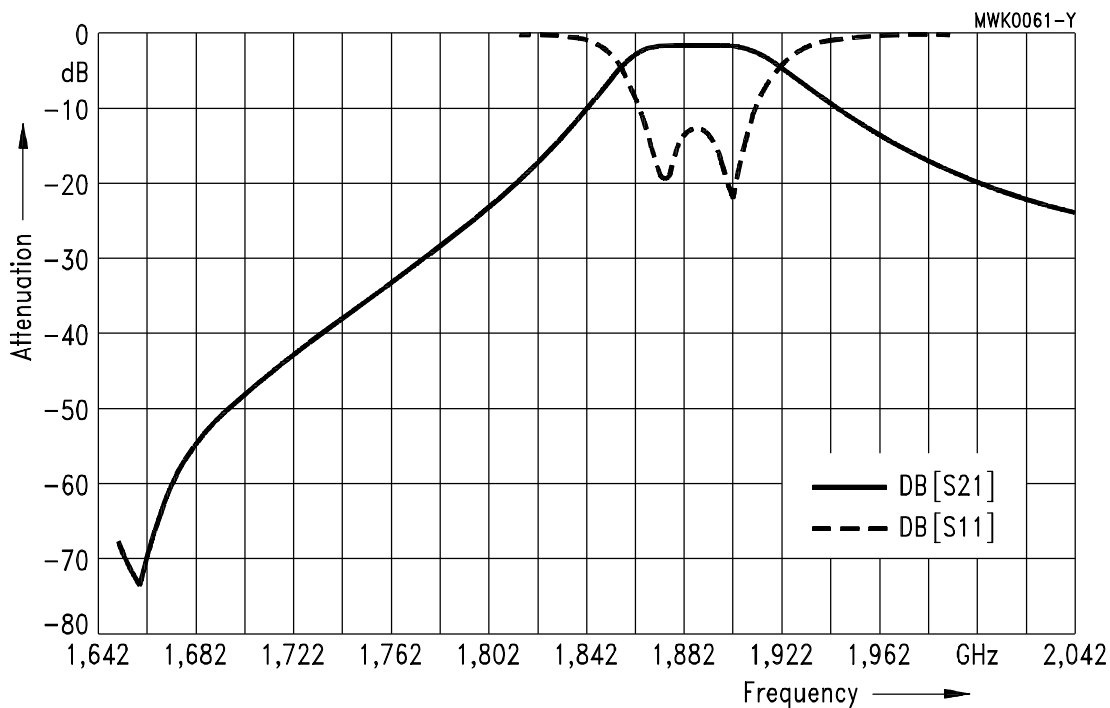
**Characteristics**

		min.	typ.	max.	
Center frequency	$f_c$	—	1890	—	MHz
Insertion loss	$\alpha_{iL}$	—	1,1	1,5	dB
Passband	$B$	20	—	—	MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$	—	0,3	1,0	dB
Standing wave ratio	$SWR$	—	1,5	2,0	
Impedance	$Z$	—	50	—	$\Omega$
Attenuation	$\alpha$				
	at 1660 ... 1680 MHz	40	45	—	dB
	at $2 f_c, 3 f_c$	18	—	—	dB

**Maximum ratings**

IEC climatic category (IEC 68-1)		- 40/+ 90/56	
Operating temperature	$T_{op}$	0/+55	°C

**Typical passband characteristic**



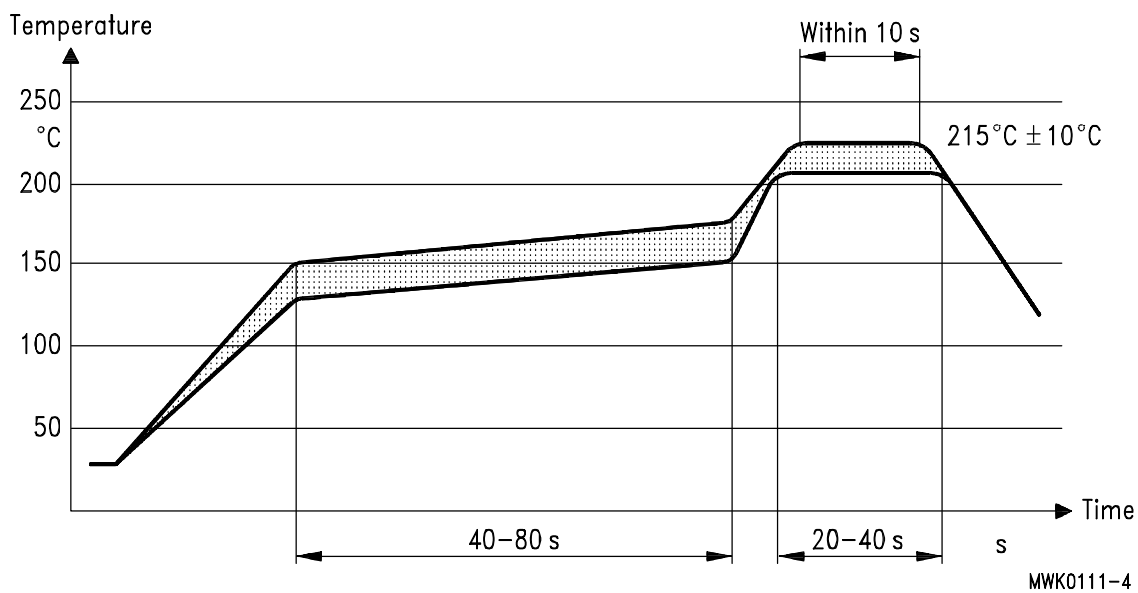
**Processing information**

- Wettability to IEC 68-2-58:  $\geq 75\%$  (after aging)

**Soldering requirements**

Soldering method	reflow	
Max. soldering temperature	235 (max. 2 s)	°C
(measuring point on top surface of the component)	225 (max. 10 s)	°C

**Recommended soldering conditions (infrared)**

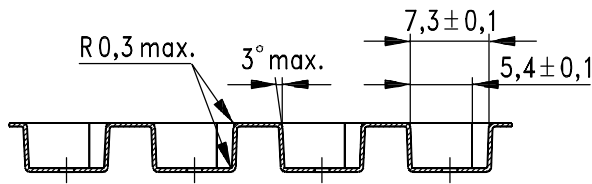


**Delivery mode**

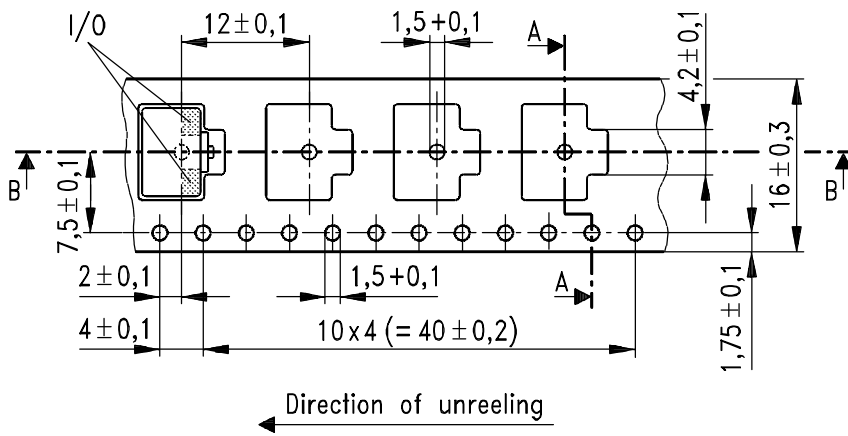
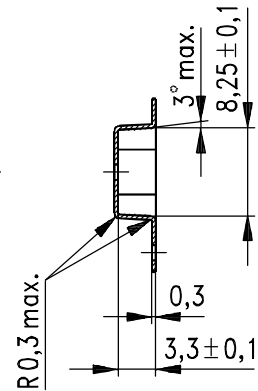
- Blister tape to IEC 286-3, polyester, grey
- Pieces/tape: 1500

**Tape:**

Profile B-B:



Profile A-A:



MWK0122-J

**Reel:** Diameter = 330 mm



### Application

- RF filter for DECT standard (Digital European Cordless Telephone)

### Construction

- SMD filter consisting of coupled resonators
- Ceramic material: (NdBa)TiO<sub>3</sub> with a coating of copper and tin

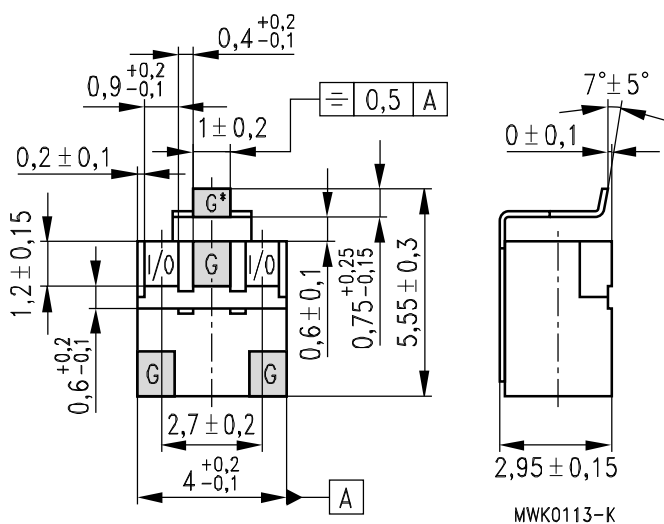
### Features

- Small size due to ceramics with high permittivity ( $\epsilon_r = 88$ )
- Low insertion loss and high temperature stability ( $TC_f = 0 \pm 10$  ppm/K)
- High attenuation of 1st and 2nd harmonic

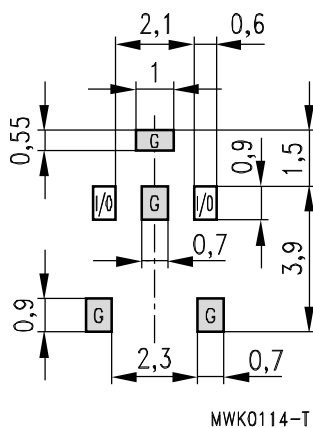
### Ordering code

- B69812-N1897-A420

### Component drawing



### Recommended footprint



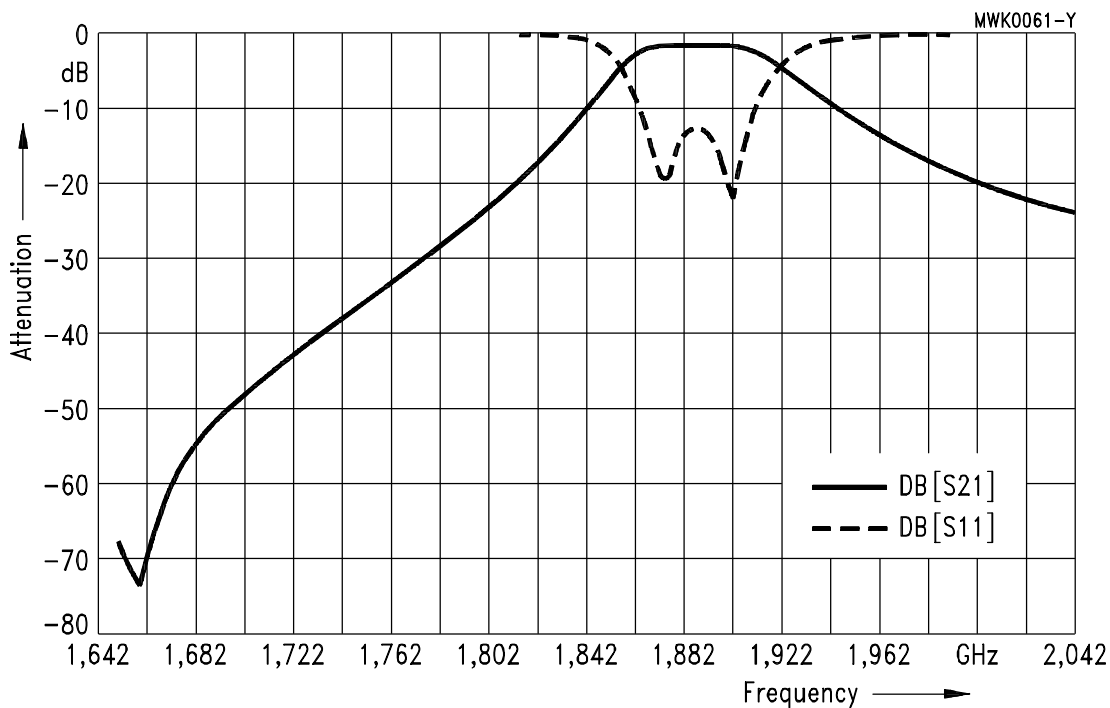
**Characteristics**

		min.	typ.	max.	
Center frequency	$f_c$	—	1890	—	MHz
Insertion loss	$\alpha_{iL}$	—	1,2	1,5	dB
Passband	$B$	20	—	—	MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$	—	—	0,5	dB
Standing wave ratio	$SWR$	—	1,5	2,0	
Impedance	$Z$	—	50	—	$\Omega$
Attenuation	$\alpha$				
	at 1660 ... 1680 MHz	37	45	—	dB
	at $2 f_c, 3 f_c$	20	—	—	dB

**Maximum ratings**

IEC climatic category (IEC 68-1)		– 40/+ 90/56	
Operating temperature	$T_{op}$	0/+55	°C

**Typical passband characteristic**



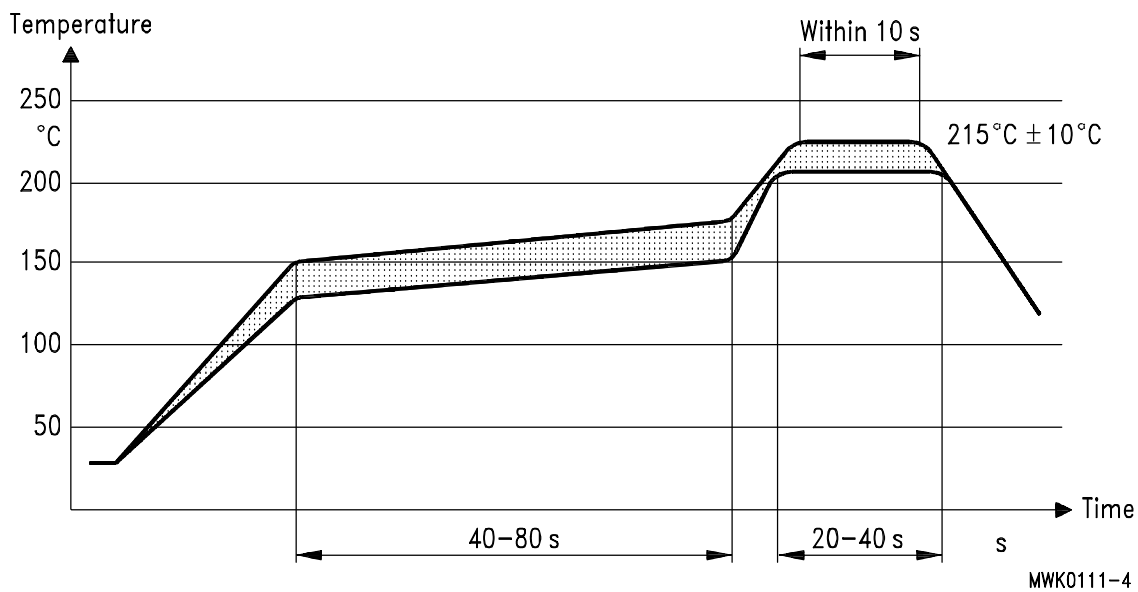
**Processing information**

- Wettability to IEC 68-2-58:  $\geq 75\%$  (after aging)

**Soldering requirements**

Soldering method	reflow	
Max. soldering temperature	235 (max. 2 s)	°C
(measuring point on top surface of the component)	225 (max. 10 s)	°C

**Recommended soldering conditions (infrared)**

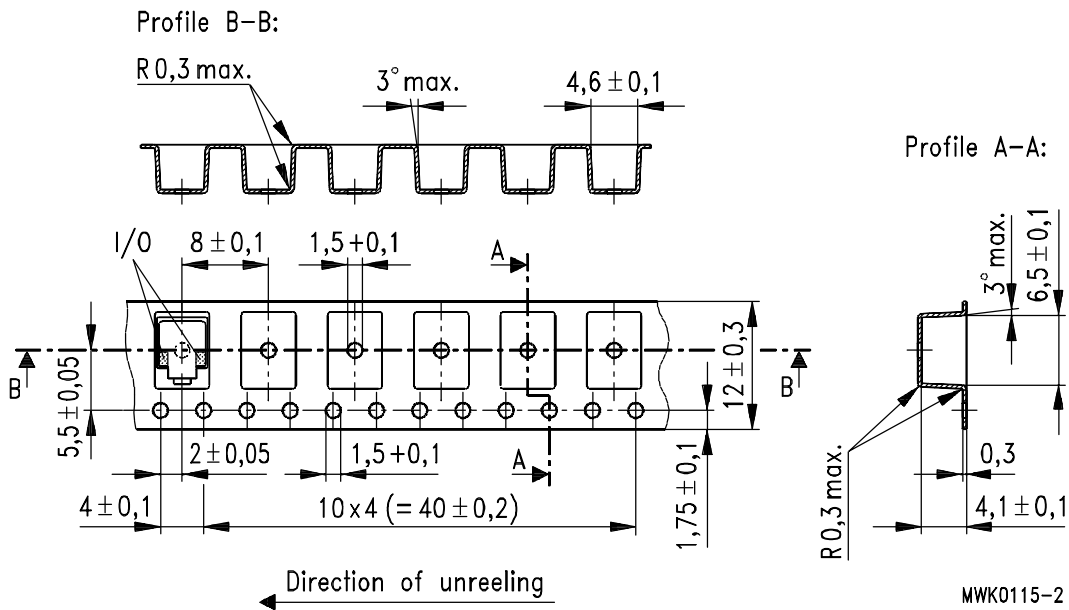




**Delivery mode**

- Blister tape to IEC 286-3, polyester, grey
- Pieces/tape: 2000

**Tape**



**Reel:** Diameter = 330 mm

### Application

- RF filter for DECT standard (Digital European Cordless Telephone)

### Construction

- SMD filter consisting of coupled resonators
- Ceramic material: (NdBa)TiO<sub>3</sub> with a coating of copper and tin

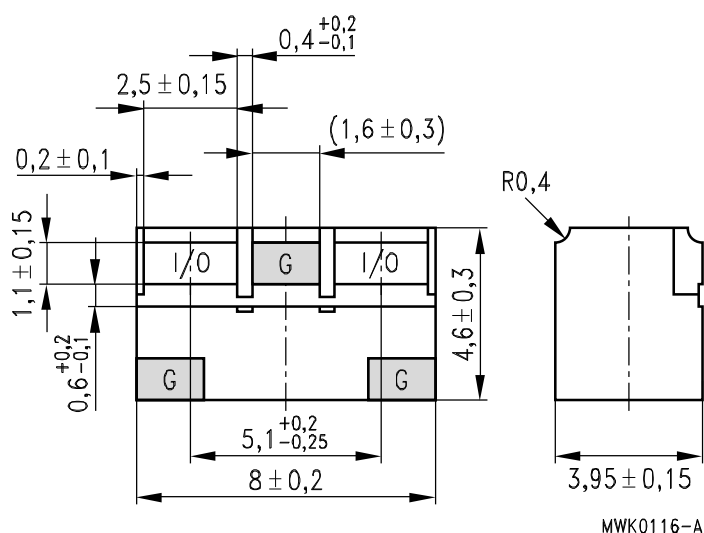
### Features

- Small size due to ceramics with high permittivity ( $\epsilon_r = 88$ )
- Low insertion loss and high temperature stability ( $TC_f = 0 \pm 10$  ppm/K)
- High attenuation of 1st and 2nd harmonic

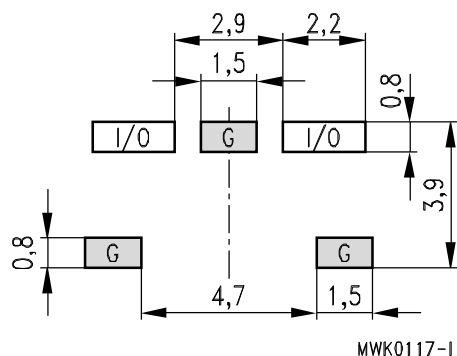
### Ordering code

- B69812-N1897-D820

### Component drawing



### Recommended footprint



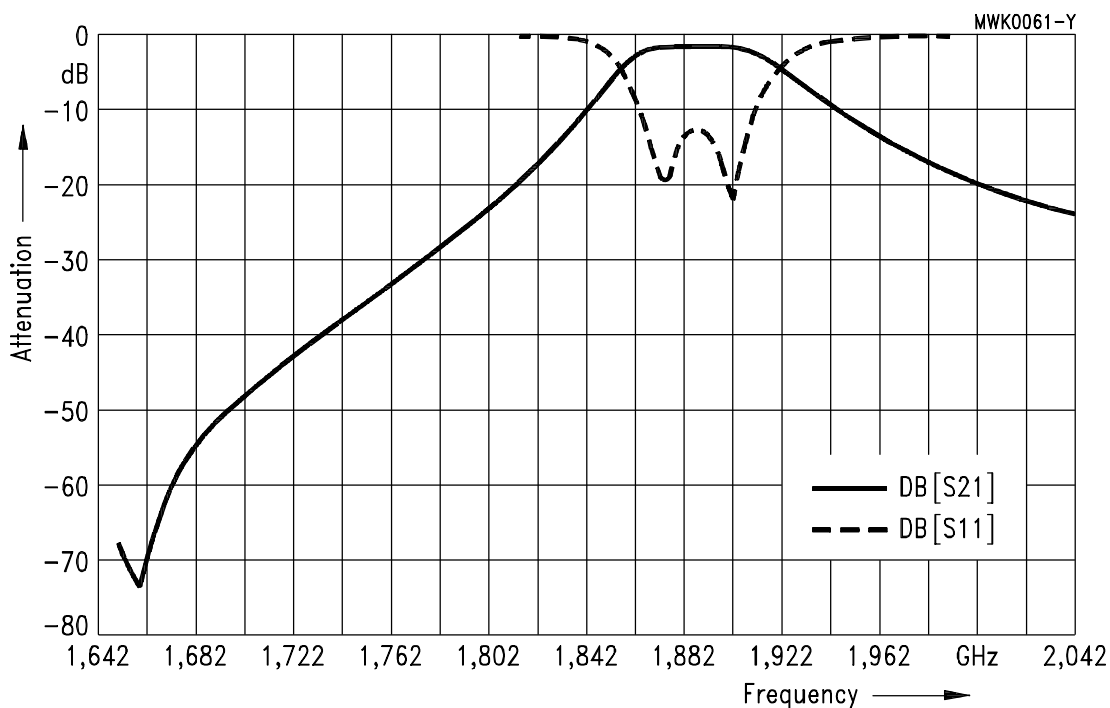
**Characteristics**

		min.	typ.	max.	
Center frequency	$f_c$	—	1890	—	MHz
Insertion loss	$\alpha_{iL}$	—	0,5	0,9	dB
Passband	$B$	20	—	—	MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$	—	—	0,2	dB
Standing wave ratio	$SWR$	—	1,5	2,0	
Impedance	$Z$	—	50	—	$\Omega$
Attenuation	$\alpha$				
	at 1660 ... 1680 MHz	35	45	—	dB
	at 1770 ... 1790 MHz	18	20	—	dB
	at 3760 ... 3800 MHz	15	—	—	dB
	at 5640 ... 5700 MHz	10	—	—	dB

**Maximum ratings**

IEC climatic category (IEC 68-1)		- 40/+ 90/56	
Operating temperature	$T_{op}$	0/+55	°C

**Typical passband characteristic**



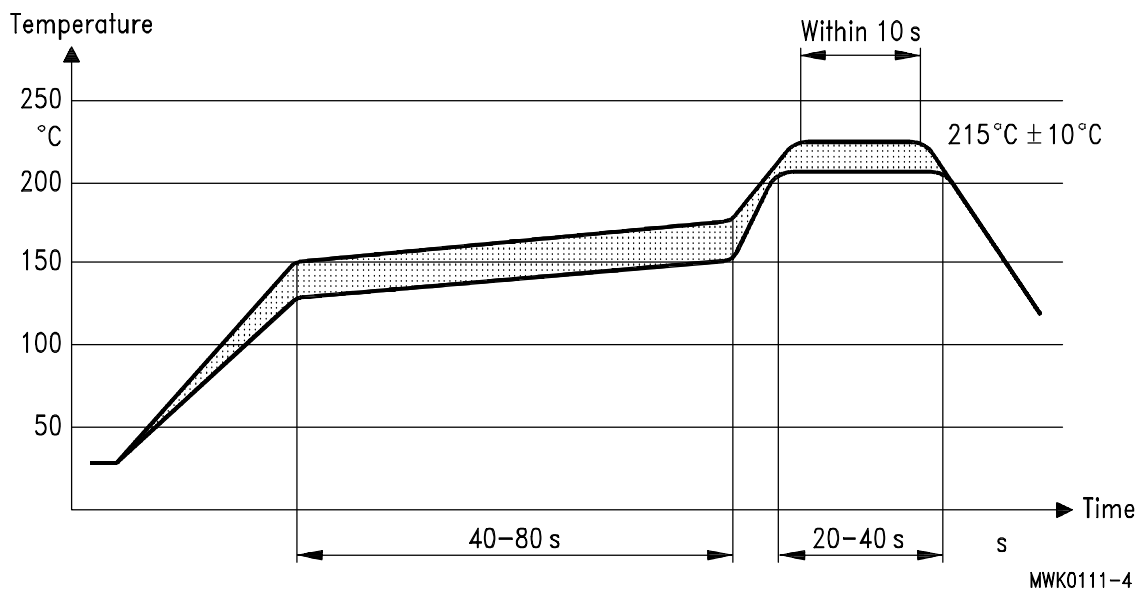
**Processing information**

- Wettability to IEC 68-2-58:  $\geq 75\%$  (after aging)

**Soldering requirements**

Soldering method	reflow	
Max. soldering temperature	235 (max. 2 s)	°C
(measuring point on top surface of the component)	225 (max. 10 s)	°C

**Recommended soldering conditions (infrared)**







Siemens Matsushita Components

# Microwave

---

# Ceramics

---

RF Filters for PCN/PCS Standard  
SC 1.747, SC 1.842, SC 1.880, SC 1.960





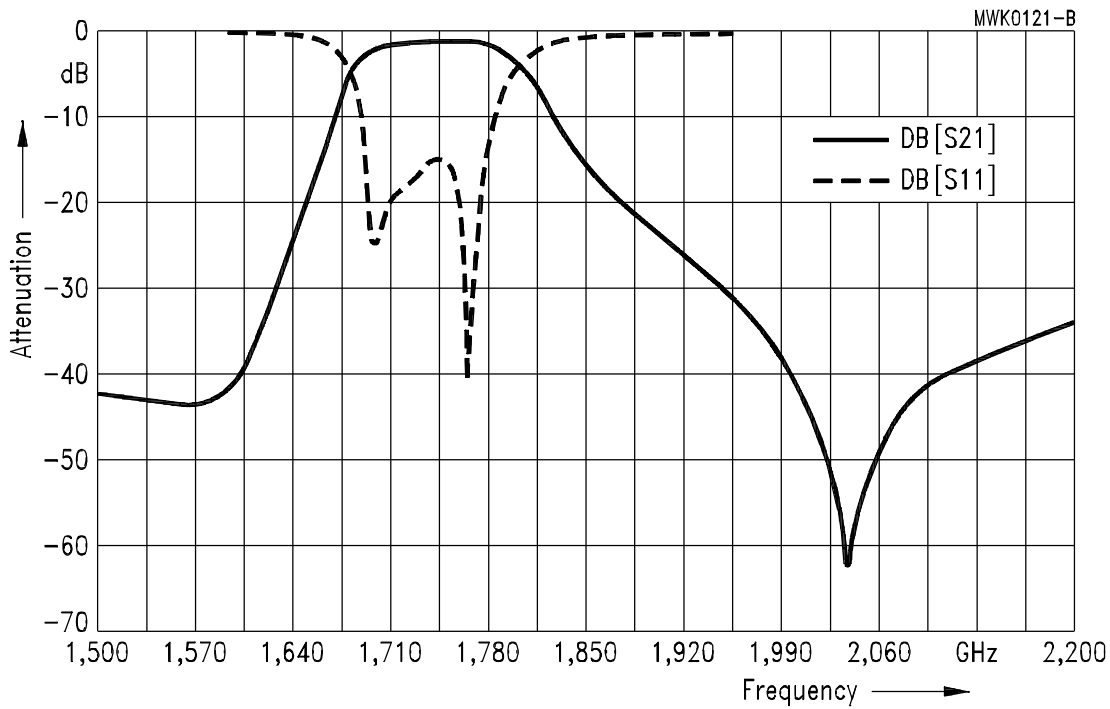
**Characteristics**

		min.	typ.	max.	
Center frequency	$f_c$	—	1747,5	—	MHz
Insertion loss	$\alpha_{iL}$	—	2,3	3,0	dB
Passband	$B$	75	—	—	MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$	—	1,2	1,5	dB
Standing wave ratio	$SWR$	—	1,4	2,0	
Impedance	$Z$	—	50	—	$\Omega$
Attenuation	$\alpha$				
	at dc ... 1600 MHz	40	45	—	dB
	at 1805 ... 1880 MHz	7	8,5	—	dB

**Maximum ratings**

IEC climatic category (IEC 68-1)		- 40/+ 90/56	
Operating temperature	$T_{op}$	- 20/+ 85	°C

**Typical passband characteristic**





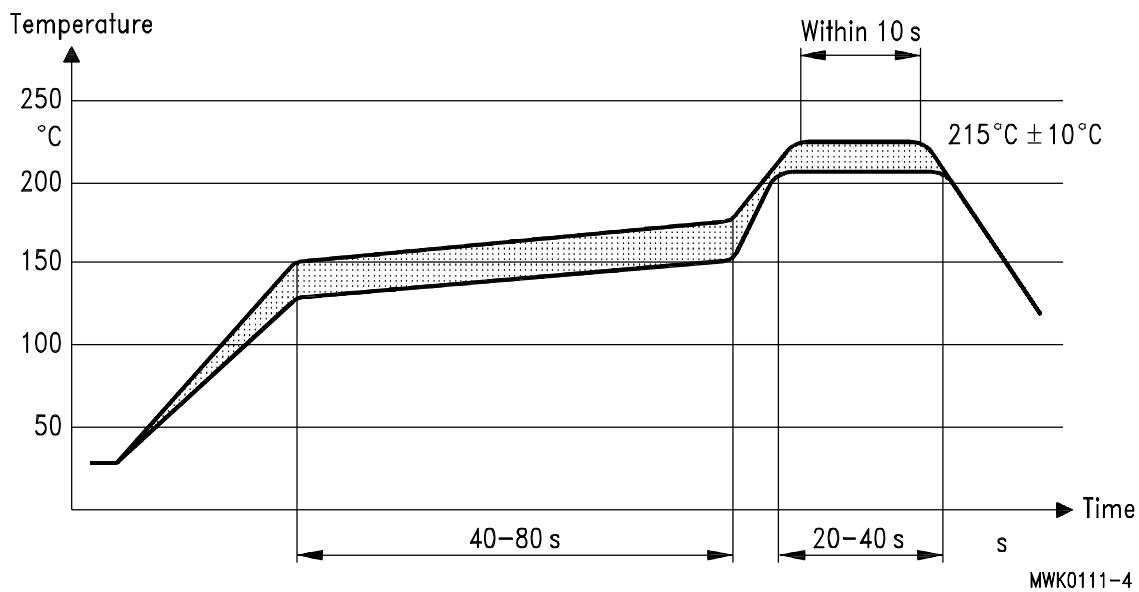
**Processing information**

- Wettability to IEC 68-2-58:  $\geq 75\%$  (after aging)

**Soldering requirements**

Soldering method	reflow	
Max. soldering temperature	235 (max. 2 s)	°C
(measuring point on top surface of the component)	225 (max. 10 s)	°C

**Recommended soldering conditions (infrared)**



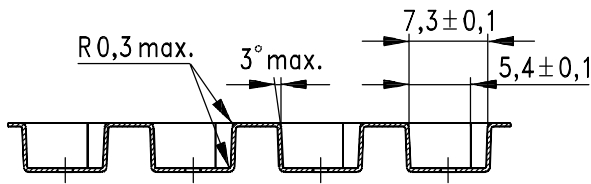
MWK0111-4

**Delivery mode**

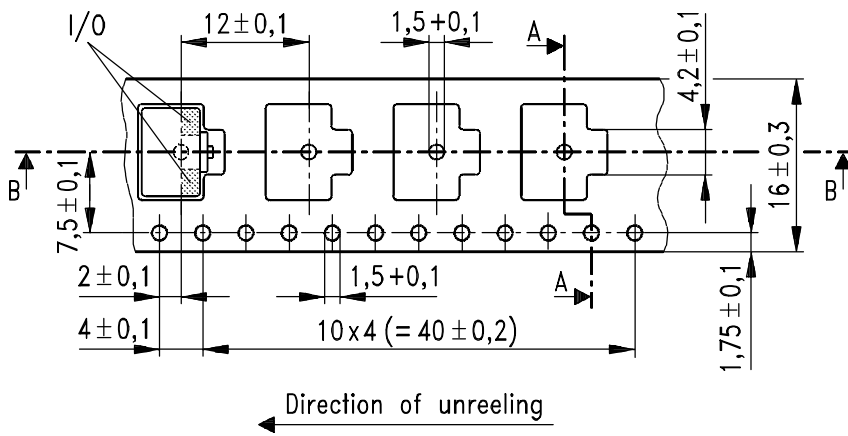
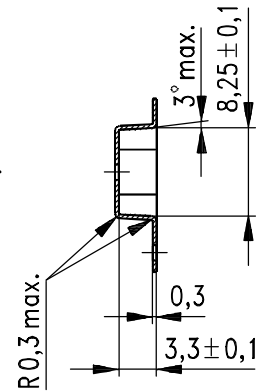
- Blister tape to IEC 286-3, polyester, grey
- Pieces/tape: 1500

**Tape:**

Profile B-B:



Profile A-A:



MWK0122-J

**Reel:** Diameter = 330 mm



**Application**

- RF filter for PCN RX standard (Personal Communication Network)

**Construction**

- SMD filter consisting of coupled resonators
- Ceramic material: (NdBa)TiO<sub>3</sub> with a coating of copper and tin

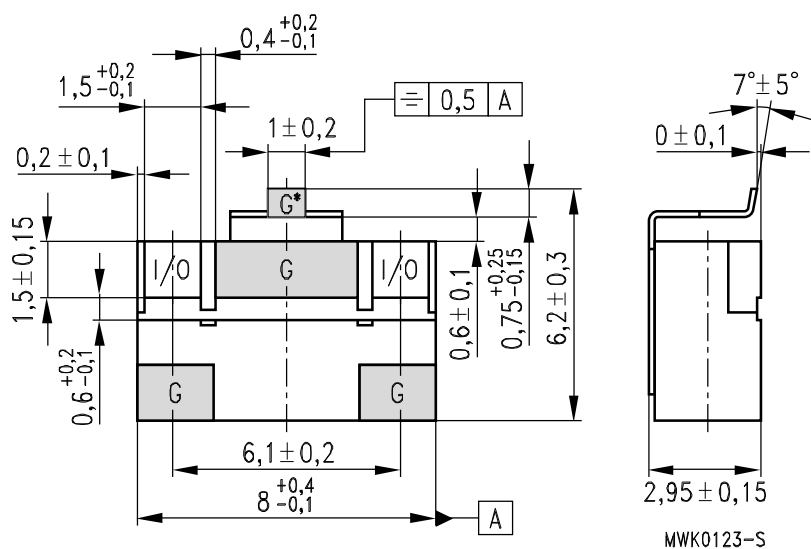
**Features**

- Small size due to ceramics with high permittivity ( $\epsilon_r = 88$ )
- Low insertion loss and high temperature stability ( $TC_f = 0 \pm 10$  ppm/K)
- High attenuation of 1st and 2nd harmonic

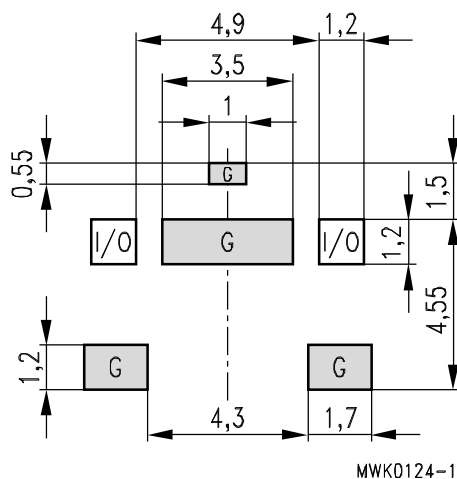
**Ordering code**

- B69813-N1847-D875

**Component drawing**



**Recommended footprint**



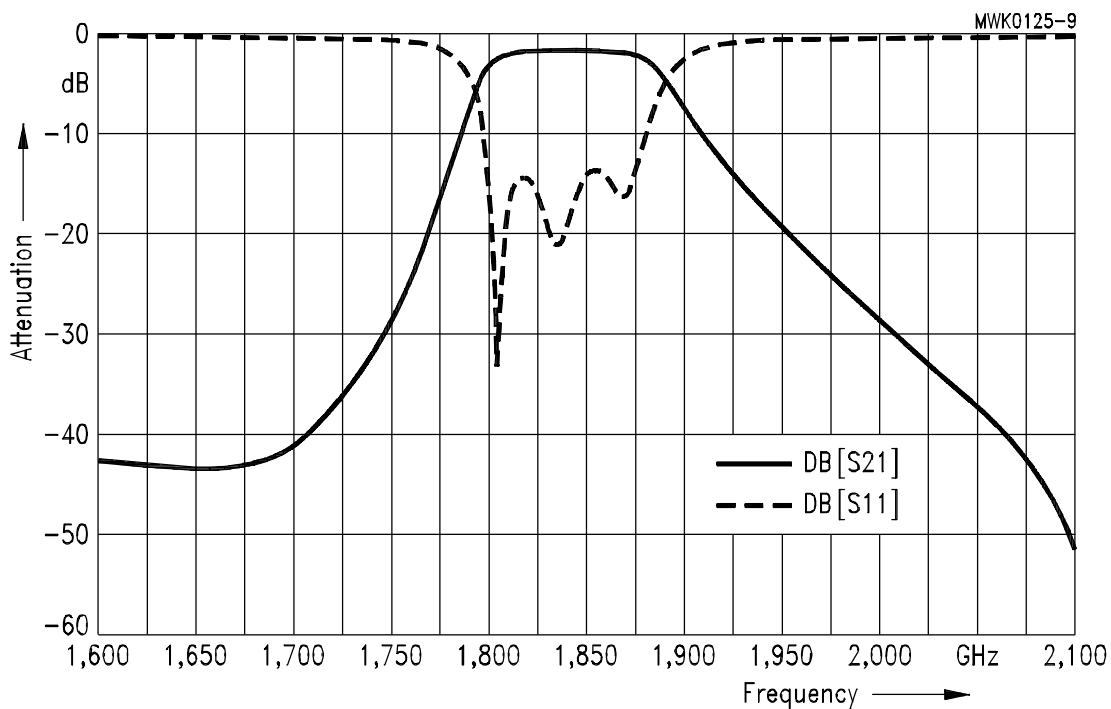
**Characteristics**

		min.	typ.	max.	
Center frequency	$f_c$	—	1842,5	—	MHz
Insertion loss	$\alpha_{iL}$	—	2,3	3,0	dB
Passband	$B$	75	—	—	MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$	—	1,2	1,5	dB
Standing wave ratio	$SWR$	—	1,4	2,0	
Impedance	$Z$	—	50	—	$\Omega$
Attenuation	$\alpha$				
	dc ... 1600 MHz	40	45	—	dB
	at 1710 ... 1785 MHz	10	13	—	dB
	at 1920 ... 2900 MHz	10	13	—	dB

**Maximum ratings**

IEC climatic category (IEC 68-1)		– 40/+ 90/56	
Operating temperature	$T_{op}$	– 20/+ 85	°C

**Typical passband characteristic**



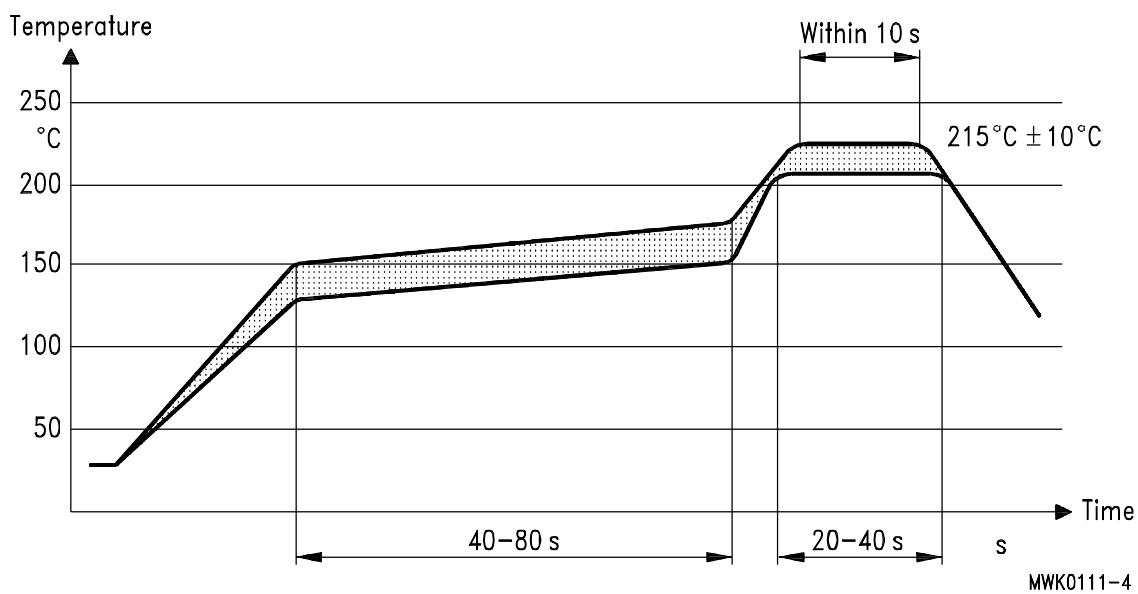
**Processing information**

- Wettability to IEC 68-2-58:  $\geq 75\%$  (after aging)

**Soldering requirements**

Soldering method	reflow	
Max. soldering temperature	235 (max. 2 s)	°C
(measuring point on top surface of the component)	225 (max. 10 s)	°C

**Recommended soldering conditions (infrared)**

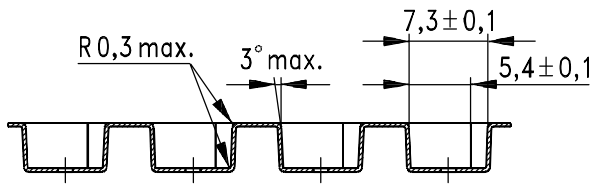


**Delivery mode**

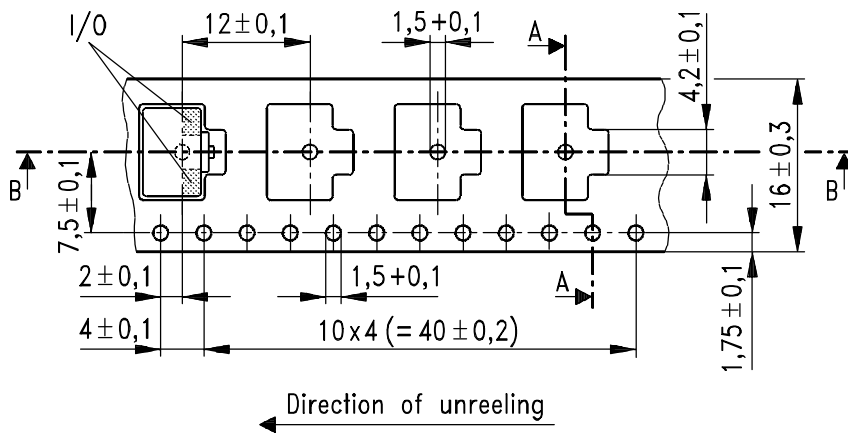
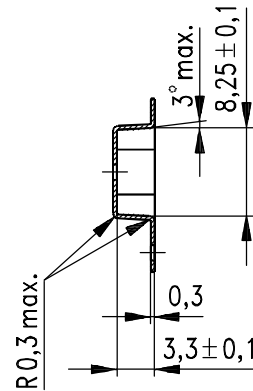
- Blister tape to IEC 286-3, polyester, grey
- Pieces/tape: 1500

**Tape:**

Profile B-B:



Profile A-A:



MWK0122-J

**Reel:** Diameter = 330 mm



**Application**

- RF filter for PCS TX standard (Personal Communication System)

**Construction**

- SMD filter consisting of coupled resonators
- Ceramic material: (NdBa)TiO<sub>3</sub> with a coating of copper and tin

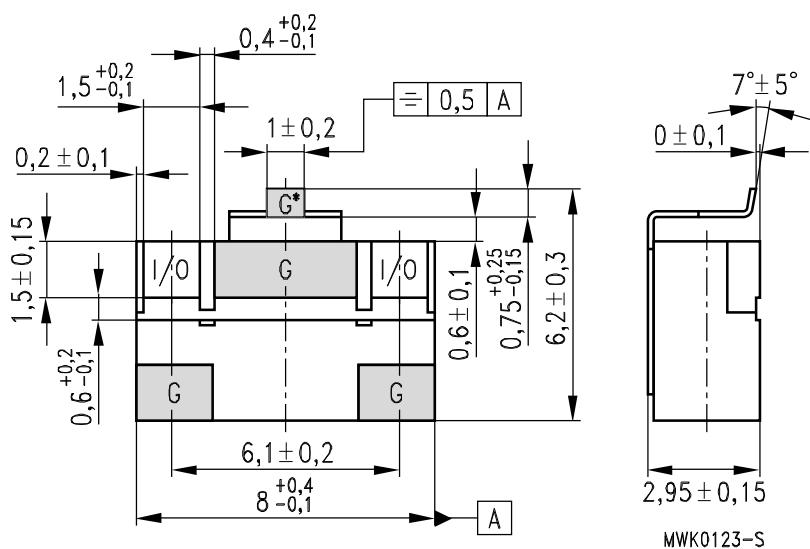
**Features**

- Small size due to ceramics with high permittivity ( $\epsilon_r = 88$ )
- Low insertion loss and high temperature stability ( $TC_f = 0 \pm 10$  ppm/K)
- High attenuation of 1st and 2nd harmonic

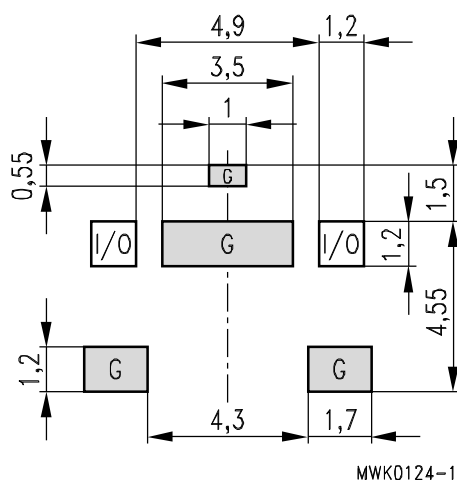
**Ordering code**

- B69813-N1887-E860

**Component drawing**



**Recommended footprint**



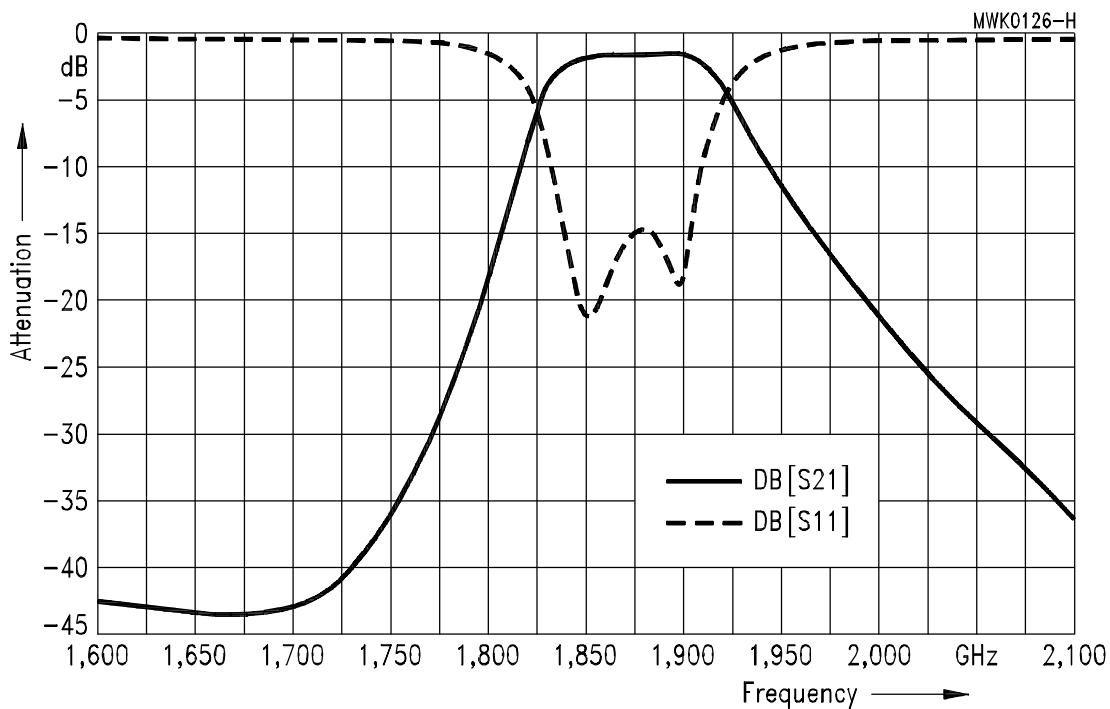
**Characteristics**

		min.	typ.	max.	
Center frequency	$f_c$	—	1880	—	MHz
Insertion loss	$\alpha_{iL}$	—	2,8	3,5	dB
Passband	$B$	60	—	—	MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$	—	1,2	1,5	dB
Standing wave ratio	$SWR$	—	1,4	2,0	
Impedance	$Z$	—	50	—	$\Omega$
Attenuation	$\alpha$				
at dc ... 1600 MHz		40	45	—	dB
at 1930 ... 1940 MHz		6	7	—	dB
at 1940 ... 1990 MHz		8	9	—	dB
at 2200 ... 2700 MHz		24	27	—	dB

**Maximum ratings**

IEC climatic category (IEC 68-1)		– 40/+ 90/56	
Operating temperature	$T_{op}$	– 20/+ 85	°C

**Typical passband characteristic**





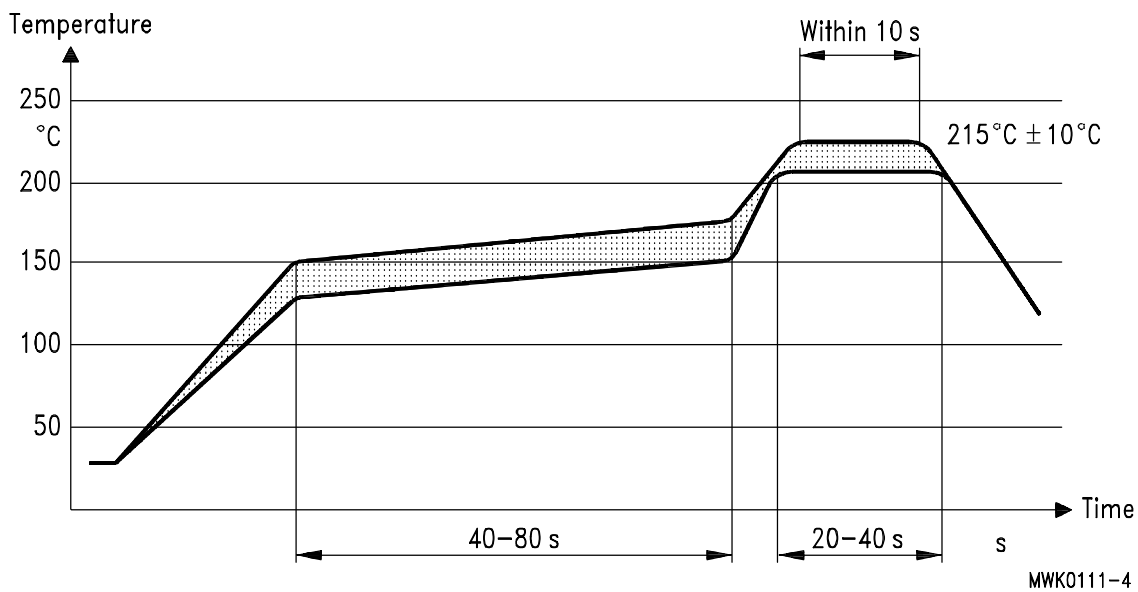
**Processing information**

- Wettability to IEC 68-2-58: ≥ 75% (after aging)

**Soldering requirements**

Soldering method	reflow	
Max. soldering temperature	235 (max. 2 s)	°C
(measuring point on top surface of the component)	225 (max. 10 s)	°C

**Recommended soldering conditions (infrared)**

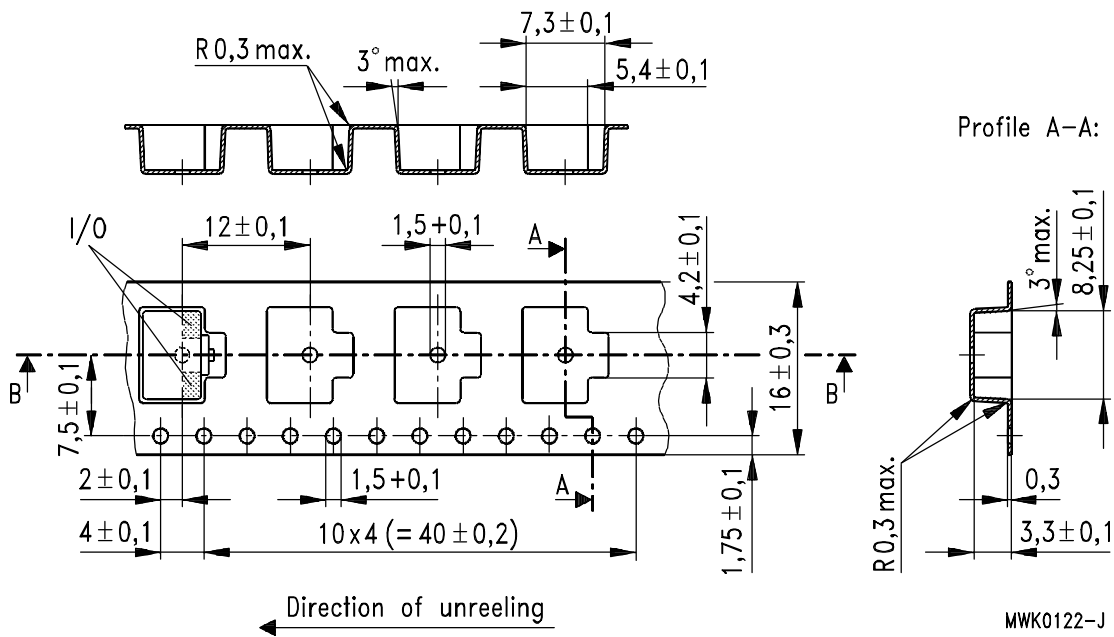


**Delivery mode**

- Blister tape to IEC 286-3, polyester, grey
- Pieces/tape: 1500

**Tape:**

: Profile B-B:



**Reel:** Diameter = 330 mm



**Application**

- RF filter for PCS RX standard (Personal Communication System)

**Construction**

- SMD filter consisting of coupled resonators
- Ceramic material: (NdBa)TiO<sub>3</sub> with a coating of copper and tin

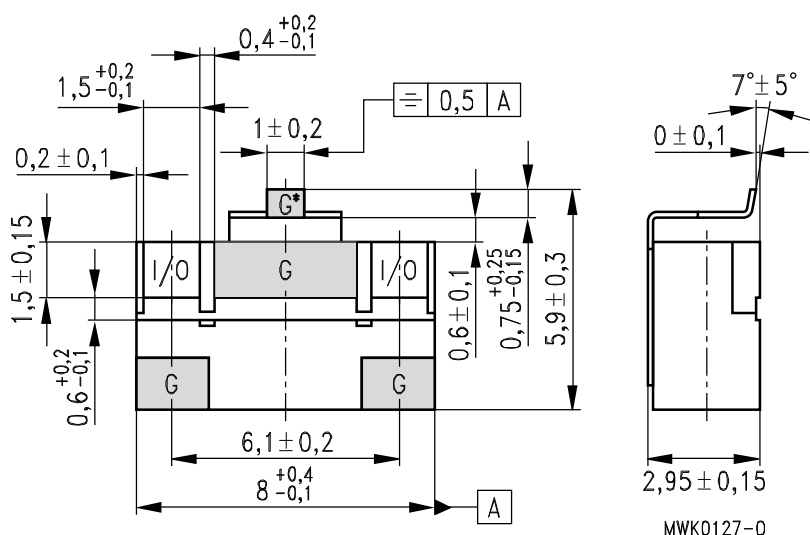
**Features**

- Small size due to ceramics with high permittivity ( $\epsilon_r = 88$ )
- Low insertion loss and high temperature stability ( $TC_f = 0 \pm 10$  ppm/K)
- High attenuation of 1st and 2nd harmonic

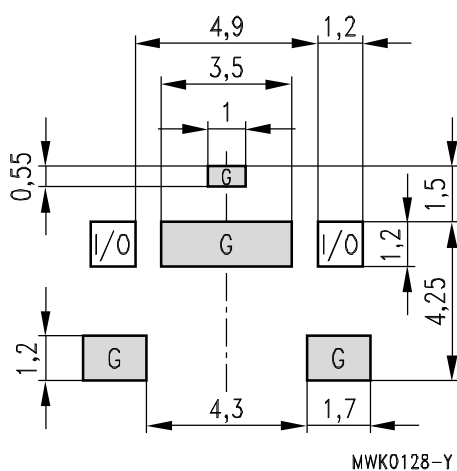
**Ordering code**

- B69813-N1967-D860

**Component drawing**



**Recommended footprint**



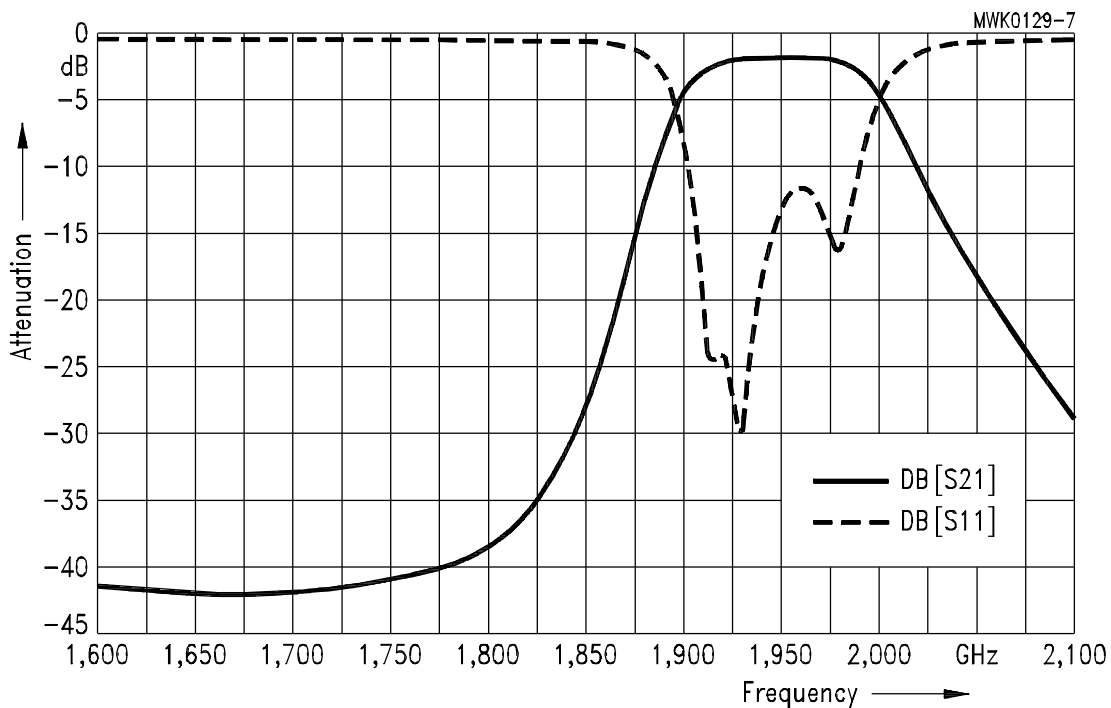
**Characteristics**

		min.	typ.	max.	
Center frequency	$f_c$	—	1960	—	MHz
Insertion loss	$\alpha_{iL}$	—	2,8	3,5	dB
Passband	$B$	60	—	—	MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$	—	1,2	1,5	dB
Standing wave ratio	$SWR$	—	1,4	2,0	
Impedance	$Z$	—	50	—	$\Omega$
Attenuation	$\alpha$				
	at dc ... 1600 MHz	40	45	—	dB
	at 1850 ... 1910 MHz	10	12	—	dB
	at 2010 ... 2030 MHz	8	9	—	dB
	at 2500 MHz	25	27	—	dB

**Maximum ratings**

IEC climatic category (IEC 68-1)		– 40/+ 90/56	
Operating temperature	$T_{op}$	– 20/+ 85	°C

**Typical passband characteristic**



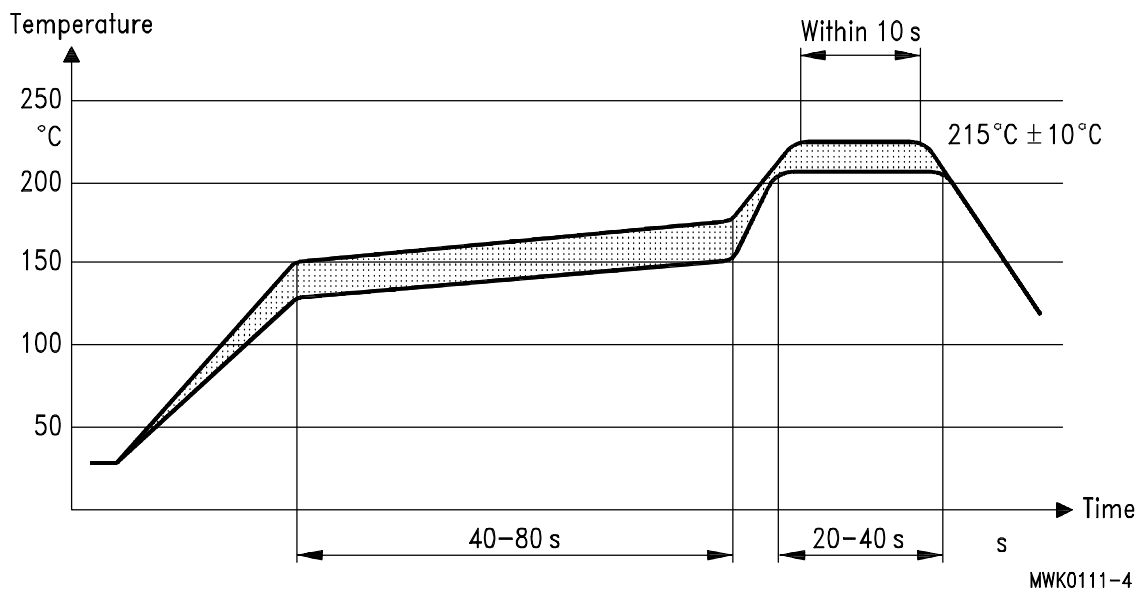
**Processing information**

- Wettability to IEC 68-2-58:  $\geq 75\%$  (after aging)

**Soldering requirements**

Soldering method	reflow	
Max. soldering temperature	235 (max. 2 s)	°C
(measuring point on top surface of the component)	225 (max. 10 s)	°C

**Recommended soldering conditions (infrared)**

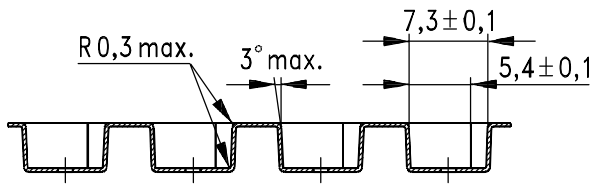


**Delivery mode**

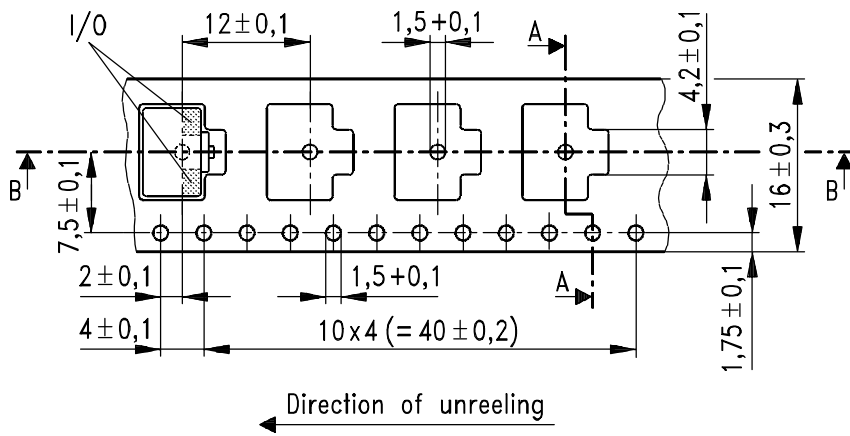
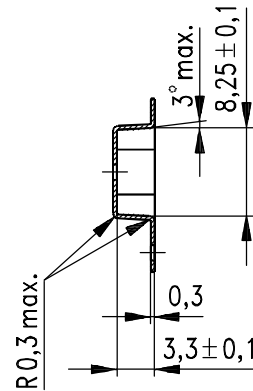
- Blister tape to IEC 286-3, polyester, grey
- Pieces/tape: 1500

**Tape:**

Profile B-B:



Profile A-A:



MWK0122-J

**Reel:** Diameter = 330 mm



Siemens Matsushita Components

# Microwave

---

# Ceramics

---

RF Filter for W-LAN Standard  
SC 2.45





### Application

- RF filter for W-LAN standard (Wireless Local Area Network)

### Construction

- SMD filter consisting of coupled resonators
- Ceramic material: (NdBa)TiO<sub>3</sub> with a coating of copper and tin

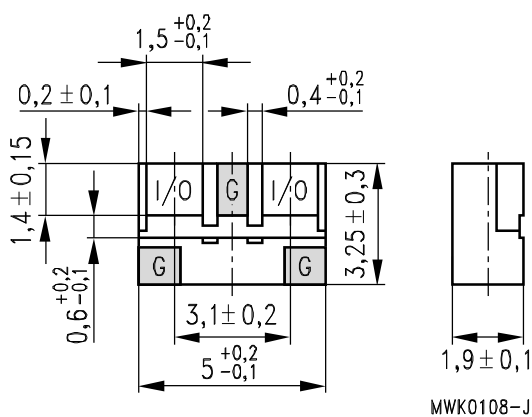
### Features

- Small size due to ceramics with high permittivity ( $\epsilon_r = 88$ )
- Low insertion loss and high temperature stability ( $TC_f = 0 \pm 10$  ppm/K)
- High attenuation of 1st and 2nd harmonic
- Excellent reflow solderability

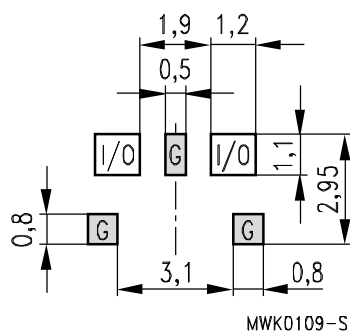
### Ordering code

- B69813-N2457-A501

### Component drawing



### Recommended footprint





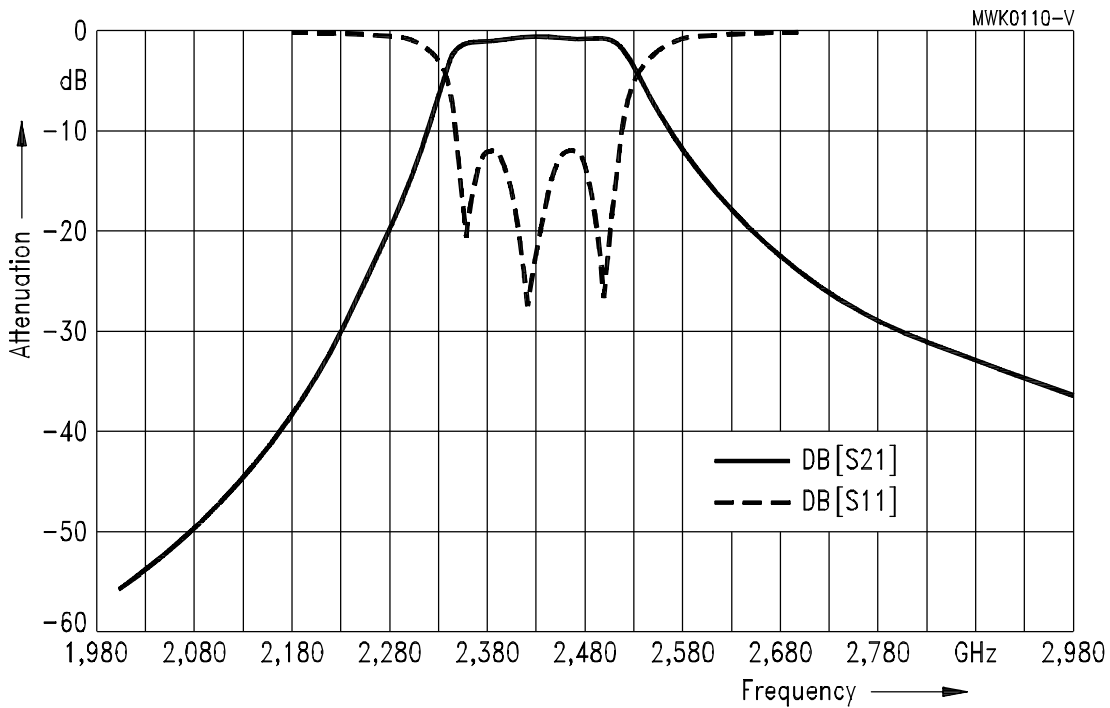
**Characteristics**

		min.	typ.	max.	
Center frequency	$f_c$	—	2,45	—	GHz
Insertion loss	$\alpha_{iL}$	—	1,2	1,7	dB
Passband	$B$	100	—	—	MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$	—	1,2	1,5	dB
Standing wave ratio	$SWR$	—	1,5	2,0	
Impedance	$Z$	—	50	—	$\Omega$
Attenuation at $f_c - 400$ MHz	$\alpha$	30	40	—	dB

**Maximum ratings**

IEC climatic category (IEC 68-1)		- 40/+ 90/56	
Operating temperature	$T_{op}$	-20/+85	°C

**Typical passband characteristic**



**Processing information**

- Wettability to IEC 68-2-58:  $\geq 75\%$  (after aging)

**Soldering requirements**

Soldering method	reflow	
Max. soldering temperature	235 (max. 2 s)	°C
(measuring point on top surface of the component)	225 (max. 10 s)	°C

**Recommended soldering conditions (infrared)**

