

Antenna Duplexers with Switch (SMD)

(For Portable Digital Cellular Telephones)

Series: **A**

Type: **A** (TX: LPF, RX: 2 Poles)

B (TX: LPF, RX: 3 Poles)



Surface Mounting Antenna Duplexers, "Series A" consisting of semiconductor switches and two different dielectric filter units for a transmitter and a receiver, are designed for applications in digital cellular telephones.

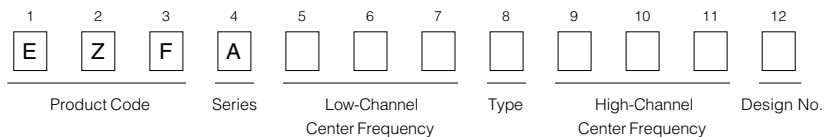
■ Features (as an example of EZFA847B942K)

- Miniture size (0.40 ml: 14 × 11 × 2.6 mm max., 0.878 g)
- Diversity
- Low insertion loss of TX-filter (0.6 dB max.)
- Correspond to digital portable cellular telephones
- Designed for reflow soldering

■ Recommended Applications

- Digital Cellular telephones (PDC 800 MHz, PDC 1.5 GHz, E · GSM, PCS, PCN)

■ Explanation of Part Numbers



■ Ratings

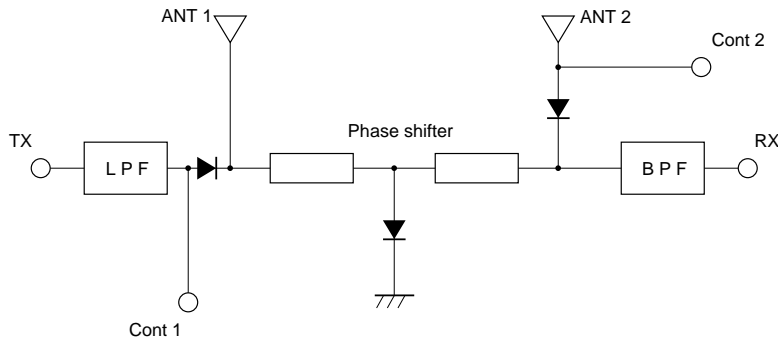
Item	Ratings
Operating Temperature Range	-30 to +80 °C
Storage Temperature Range	-40 to +85 °C
Rated Input Power	TX: 3 W RX: 1 W
Input/Output Impedance	50 Ω

■ Characteristics

System	Part Number	Channel	Poles	Center Frequency (MHz)	Frequency Bandwidth (MHz)	Insertion Loss (dB)	Ripple (dB)	VSWR	Attenuation (dB)	Dim.
PDC 1.5G (Japan)	EZFAE41AE89S	TX	0	1489	±12.0	0.6	0.5	1.7	30 min. (4287 to 4359 MHz)	Fig. A
		RX	2	1441	±12.0	2.1/1.6	0.8	2.0	36 min. (1737 to 1761 MHz)	
PDC 800M (Japan)	EZFA847B942K	TX	0	942.5	±17.5	0.6	0.5	1.7	25 min. (810 to 826 MHz)	Fig. B
		RX	3	847.5	±37.5	2.2	0.5	2.0	15 min. (925 to 960 MHz)	

■ Block Diagram (Diversity switch application)

EZFAE41AE89S
EZFA847B942K



MODE		Cont 1	Cont 2
TX on		H	L
R	ANT1 on	L	L
X	ANT2 on	L	H

■ Dimensions in mm (not to scale)

Fig. A EZFAE41AE89S

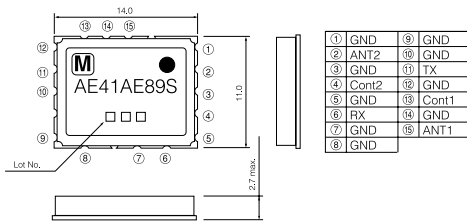
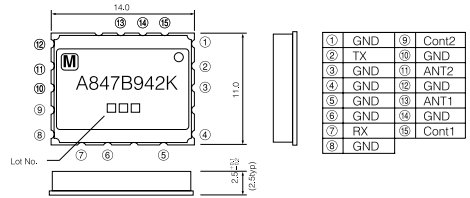


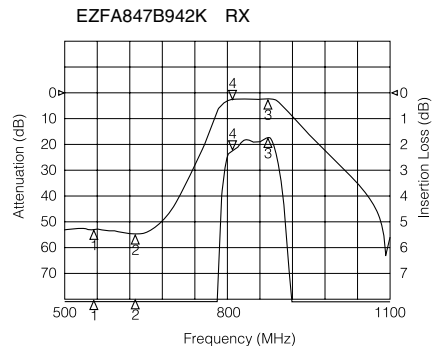
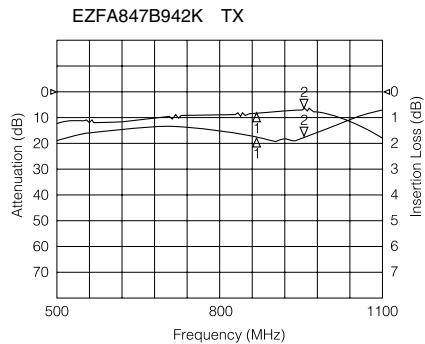
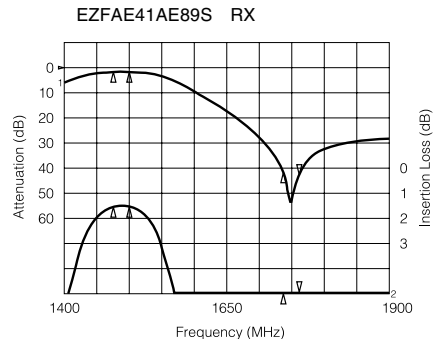
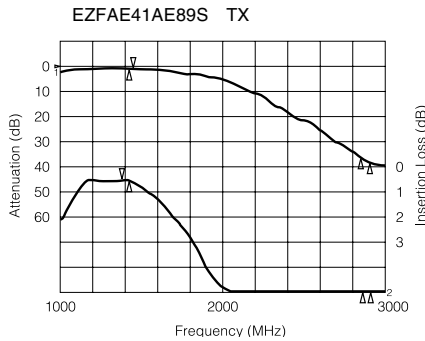
Fig. B EZFA848B942K



(Third angle projection)

■ Typical Characteristics

TX, RX Frequency Characteristics



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Antenna Duplexers with Switch for PHS base station

Series: **A**

Type: **DA** (2 branch)
DB (4 branch)



The Antenna Duplexers, Series "A" consisting of semiconductor switches and dielectric filtering units, are designed for application to diversity transmission and for reception system in PHS base station.

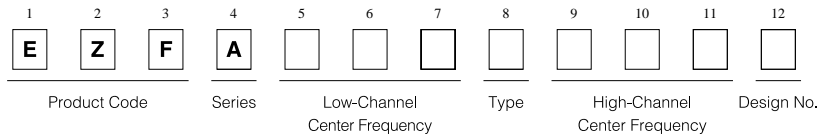
■ **Features**

- Miniature and thin type SMD
- Designed for 2 or 4 channel diversity transmission system
- Designed for 2 or 4 channel diversity reception system
- Low Insertion Loss
- High Isolation Ratio (Tx – Rx)
- Rated Input Power for Transmission : 100 to 300 mW
- Designed for reflow soldering

■ **Recommended Applications**

- PHS base station
- WLL

■ **Explanation of Part Numbers**



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■ Ratings

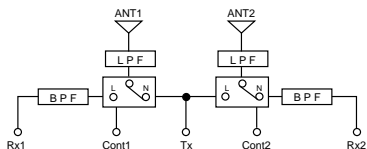
Item	Ratings
Operating Temperature Range	-30 to +70 °C
Storage Temperature Range	-40 to +85 °C
Rated Input Power	Tx: 3 W Rx: 1 W
Input/Output Impedance	50 Ω

■ Characteristics

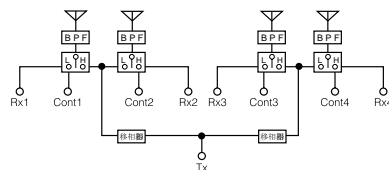
System	Part Number	Channel	Poles	Center Frequency (MHz)	Frequency Bandwidth (MHz)	Insertion Loss (dB)	Ripple (dB)	VSWR	Isolation (Tx-Rx) (dB)	Attenuation (dB)	Dim.
PHS 2 branch	EZFAK07DK07A	TX	0	1907	±13.0	1.5	0.5	1.7	23 min.	25 min. (3788to3840 MHz)	Fig. A
		RX	2	1907	±13.0	2.0	0.5	2.0		30 min. (1646to1672 MHz)	
PHS 4 branch	EZFAK07DK07B	TX	2	1907	±13.0	2.0	0.5	2.0	20 min.	10 min. (3788to3840 MHz)	Fig. B
		RX	2	1907	±13.0	1.6	0.5	2.0		14 min. (1646to1672 MHz)	

■ Block Diagram

EZFAK07DK07A



EZFAK07DK07B



MODE	Cont 1	Cont 2
TX1 on (ANT1)	H	L
TX2 on (ANT2)	L	H
RX on	L	L

* High level : +5.0±0.1V
* Low level : 0±0.1V

MODE	Cont 1	Cont 2	Cont 3	Cont 4
TX1 on (ANT1)	H	L	L	L
TX2 on (ANT2)	L	H	L	L
TX3 on (ANT3)	L	L	H	L
TX4 on (ANT4)	L	L	L	H
RX on	L	L	L	L

* High level : +5.0±0.1V
* Low level : -6.0±0.1V

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■ Dimensions in mm (not to scale)

Fig. A EZFAK07DK07A

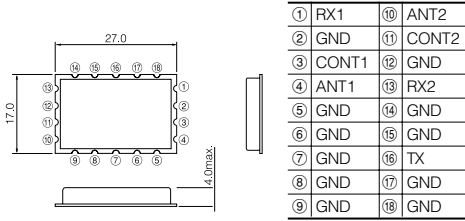
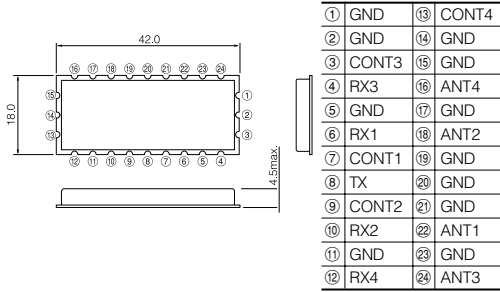


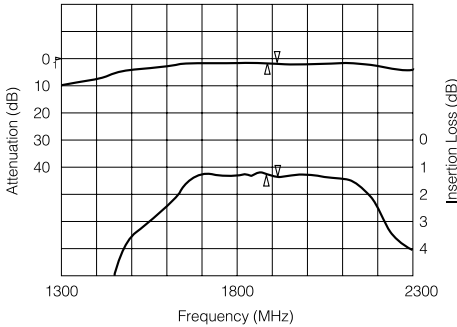
Fig. B EZFAK07DK7B



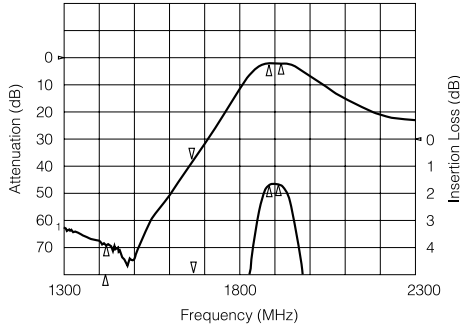
(Third angle projection)

■ Typical Characteristics

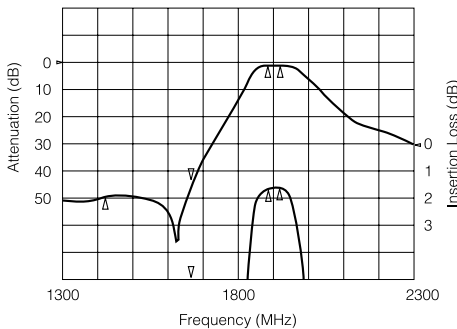
EZFAK07DK07A TX



EZFAK07DK07A RX



EZFAK07DK07B TX



EZFAK07DK07B RX

