

RKP436KE

Ultra small Package Composite Pin Diode for Antenna Switching

REJ03G1864-0100

Rev.1.00

Nov 19, 2009

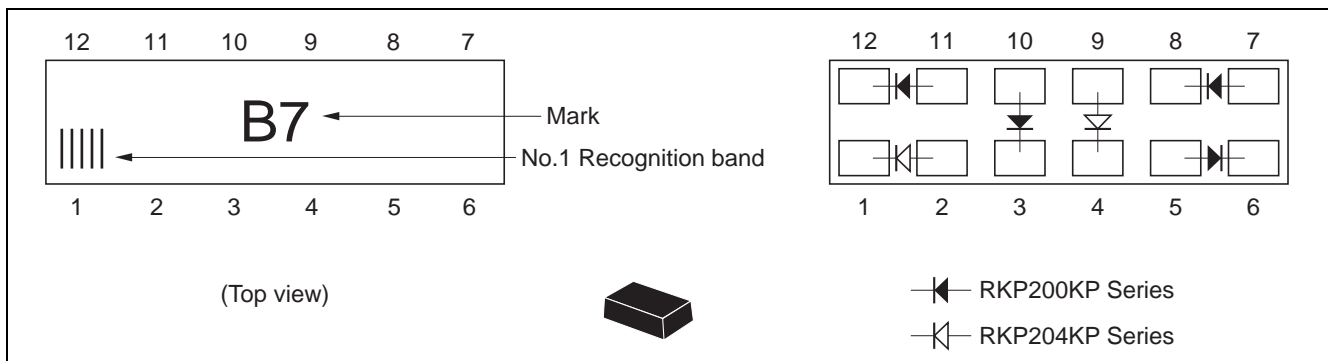
Features

- An optimal solution for antenna switching in mobile phones.
- Low capacitance. ($C = 0.35 \text{ pF max}$)
- Low forward resistance. ($r_f = 1.1 \Omega$, $r_{fmax} = 1.3 \Omega$ @ $I_F = 10 \text{ mA}$, $f = 100 \text{ MHz}$)
- Halogen free, Environmental friendly Package includes Conformity to RoHS Directive.
- Ultra small Package ($2.47 \times 0.67 \text{ mm}$ Size leadless type) of diode array with six elements.

Ordering Information

Part No.	Laser Mark	Package Name	Package Code	Taping Abbreviation (Quantity)
RKP436KE R	B7	MP6-12	PXSN0012ZA-A	R (10,000 pcs / reel)

Pin Arrangement



Absolute Maximum Ratings

(Ta = 25°C)

Item	Symbol	Value	Unit
Reverse voltage	V_R	30	V
Forward current	I_F	100	mA
Power dissipation	P_d^{*1}	100	mW
	P_d^{*2}	200	
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55 to +125	°C

Notes: 1. Per one device.

2. Value at Package total.

Electrical Characteristics (RKP200KP series)

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_R	—	—	100	nA	$V_R = 30\text{ V}$
Forward voltage	V_F	—	—	1.0	V	$I_F = 10\text{ mA}$
Capacitance	C	—	—	0.35	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
Forward resistance	r_f	—	—	1.3	Ω	$I_F = 10\text{ mA}, f = 100\text{ MHz}$
ESD-Capability ^{*1}	—	100	—	—	V	C = 200 pF, R = 0 Ω , Both forward and reverse direction 1 pulse.

Electrical Characteristics (RKP204KP series)

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_R	—	—	100	nA	$V_R = 30\text{ V}$
Forward voltage	V_F	—	—	1.0	V	$I_F = 10\text{ mA}$
Capacitance	C	—	—	0.35	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
Forward resistance	r_f	—	—	1.1	Ω	$I_F = 10\text{ mA}, f = 100\text{ MHz}$
ESD-Capability ^{*1}	—	100	—	—	V	C = 200 pF, R = 0 Ω , Both forward and reverse direction 1 pulse.

Notes: 1. Failure criterion; $I_R > 100\text{ nA}$ at $V_R = 30\text{ V}$

2. Please do not use the soldering iron due to avoid high stress to the MP6-12 package.

Main Characteristics (RKP200KP Series)

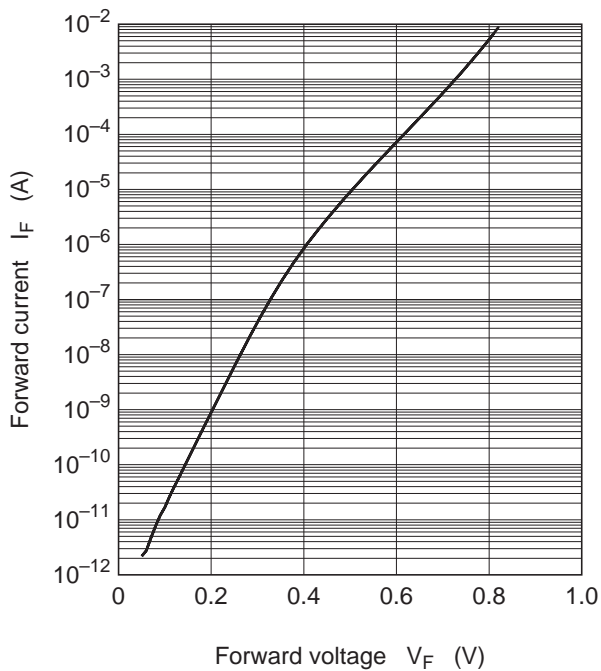


Fig.1 Forward current vs. Forward voltage

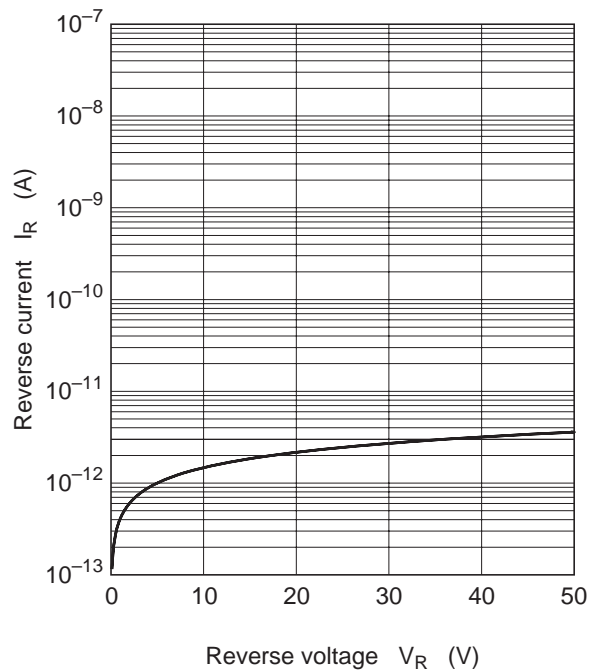


Fig.2 Reverse current vs. Reverse voltage

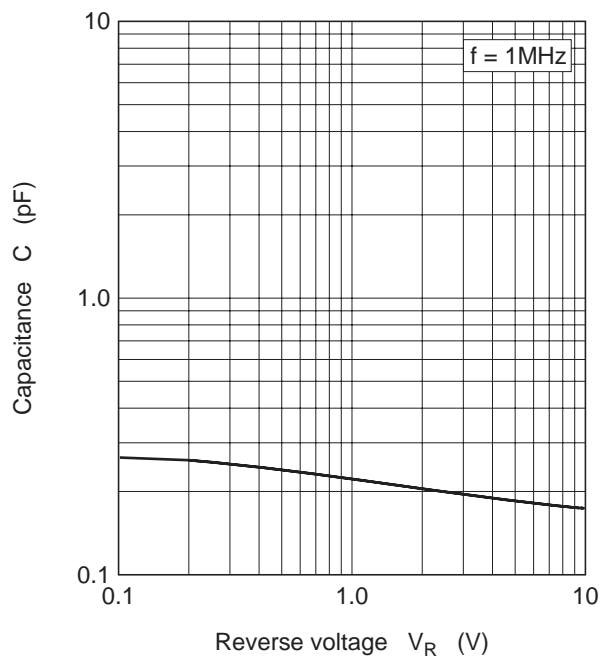


Fig.3 Capacitance vs. Reverse voltage

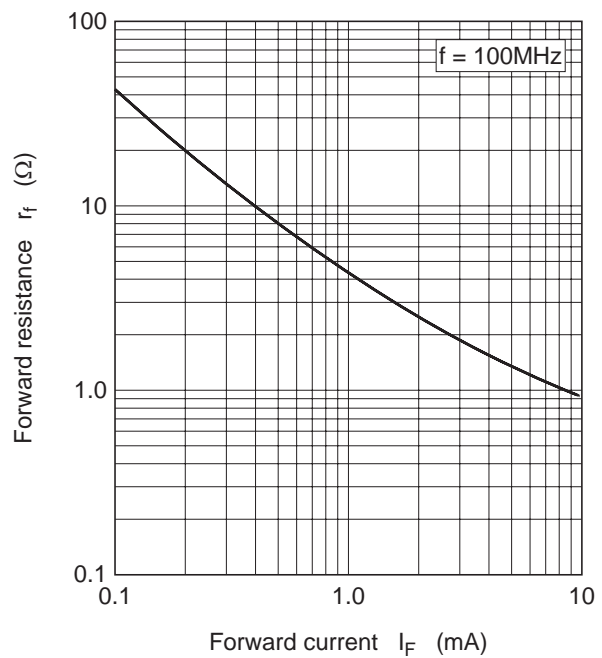


Fig.4 Forward resistance vs. Forward current

Main Characteristics (RKP204KP Series)

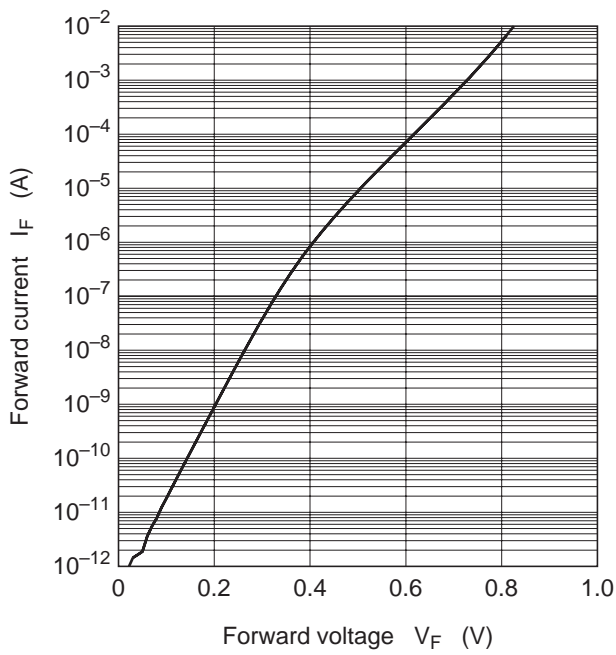


Fig.1 Forward current vs. Forward voltage

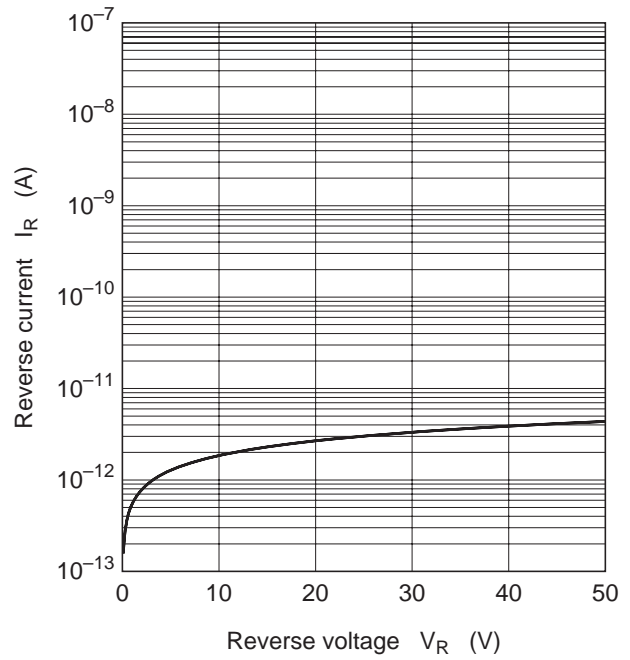


Fig.2 Reverse current vs. Reverse voltage

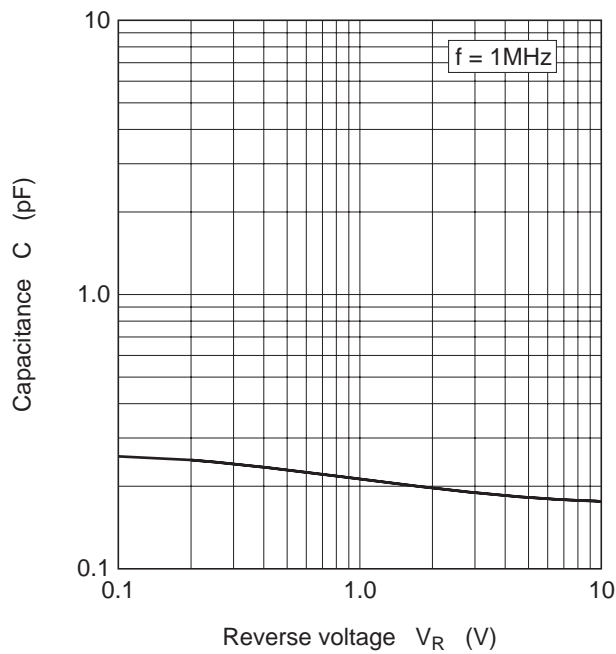


Fig.3 Capacitance vs. Reverse voltage

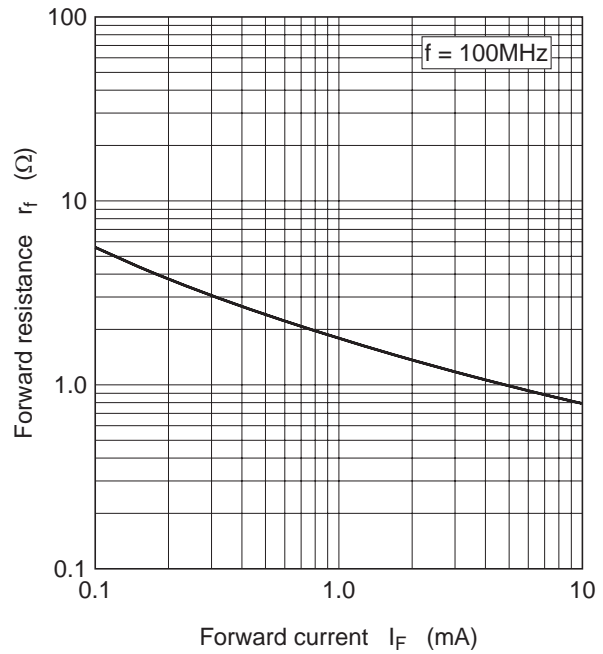
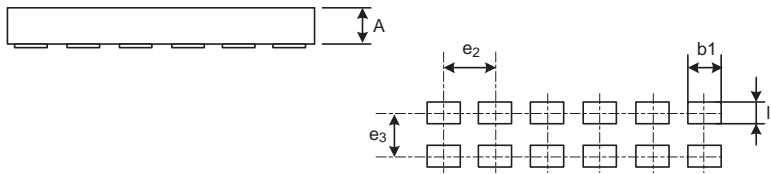
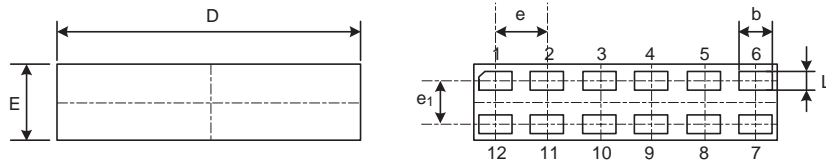


Fig.4 Forward resistance vs. Forward current

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
MP6-12	—	PXSN0012ZA-A	MP6-12V	0.0012g



Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A	0.27	0.30	0.33
b	0.24	0.27	0.30
D	2.44	2.47	2.50
E	0.64	0.67	0.70
e	-	0.42	-
e ₁	-	0.38	-
L	0.16	0.19	0.22
b ₁	-	0.27	-
e ₂	-	0.42	-
e ₃	-	0.38	-
l ₁	-	0.19	-

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April 1st, 2010
Renesas Electronics Corporation

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