

# RKP414KS

## Composite Pin Diode for Antenna Switching

REJ03G1614-0100  
Rev.1.00  
Jan 10, 2008

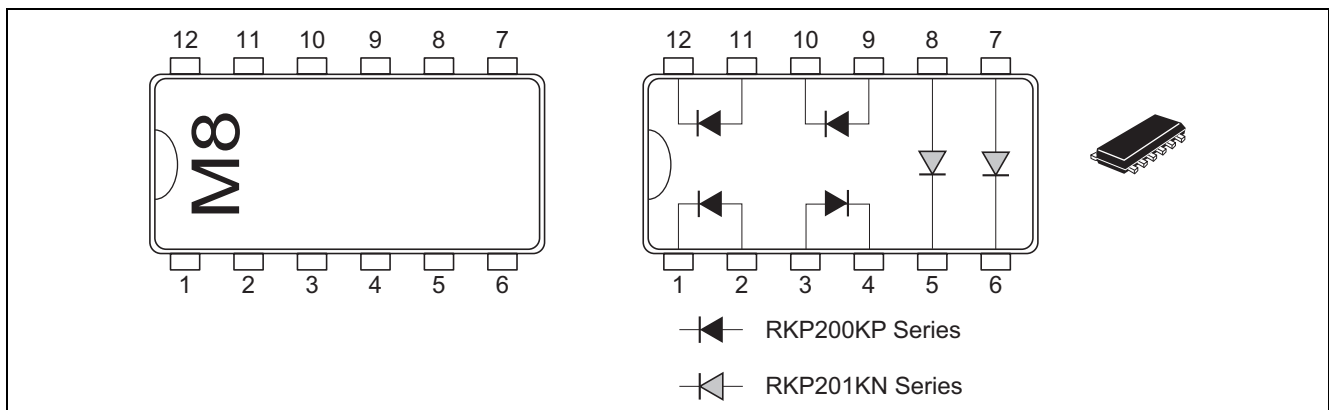
### Features

- An optimal solution for antenna switching in mobile phones.
- Low capacitance. ( $C = 0.35 \text{ pF max}$ )
- Low forward resistance. ( $r_f = 2.0 \Omega \text{ max @ } I_F = 2 \text{ mA, } f = 100 \text{ MHz}$ )
- Thin outline of diode array with Six different kind of elements (MFP12) is suitable for surface mount design.

### Ordering Information

Part No.	Laser Mark	Package Name	Package Code
RKP414KS	M8	MFP12	PUSF0012ZA-A

### 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	$P_d^*$	100	mW
Junction temperature	$T_j$	125	°C
Storage temperature	$T_{stg}$	-55 to +125	°C

Note: Per one device

## Electrical Characteristics (RKP200KP Series)

(Ta = 25°C)

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

## Electrical Characteristics (RKP201KN Series)

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Forward voltage	$V_F$	—	—	0.9	V	$I_F = 2 \text{ mA}$
Reverse current	$I_R$	—	—	100	nA	$V_R = 30 \text{ V}$
Capacitance	C	—	—	0.35	pF	$V_R = 1 \text{ V}, f = 1 \text{ MHz}$
Forward resistance	$r_f$	—	—	2.0	$\Omega$	$I_F = 2 \text{ mA}, f = 100 \text{ MHz}$
ESD-Capability *1	—	100	—	—	V	C = 200 pF, $R = 0 \Omega$ , Both forward and reverse direction 1 pulse.

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

2. For MFP12 package, the material of lead is exposed for cutting plane. There for, soldering nature of lead tip part is considered as unquestioned. Please kindly consider soldering nature.

Main Characteristics (RKP200KP Series)

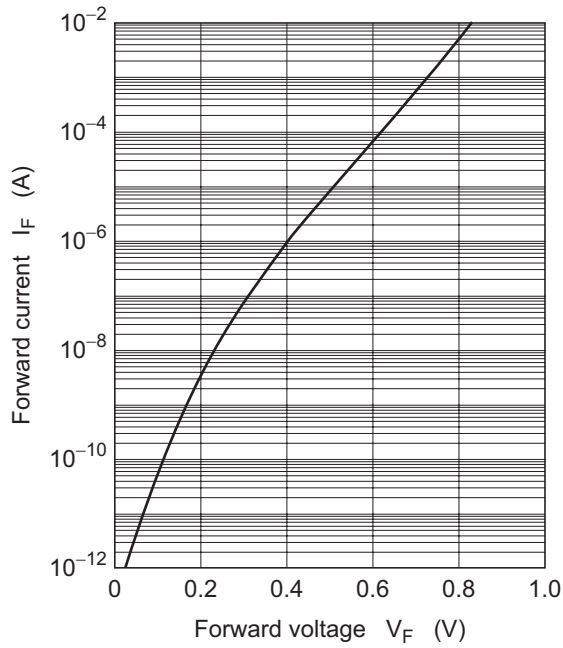


Fig.1 Forward current vs. Forward voltage

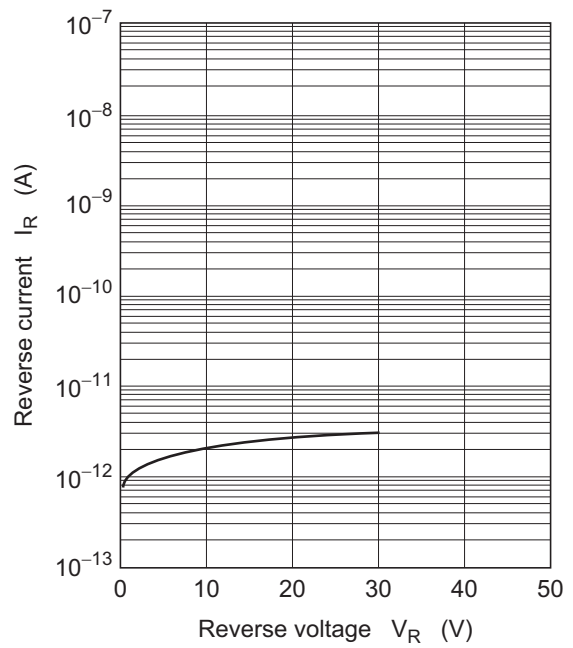


Fig.2 Reverse current vs. Reverse voltage

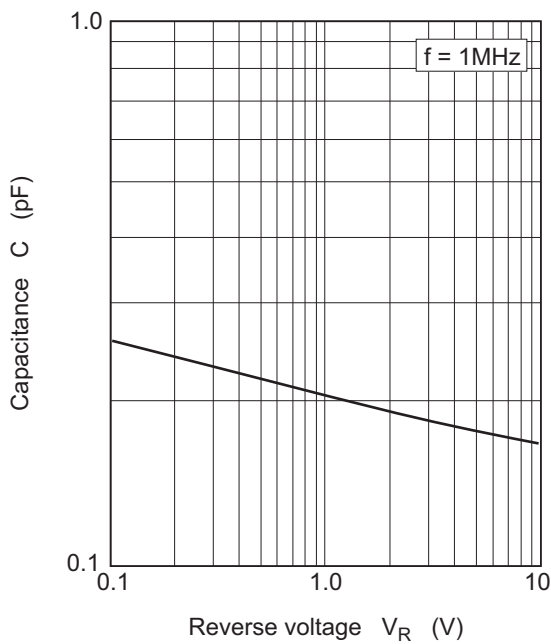


Fig.3 Capacitance vs. Reverse voltage

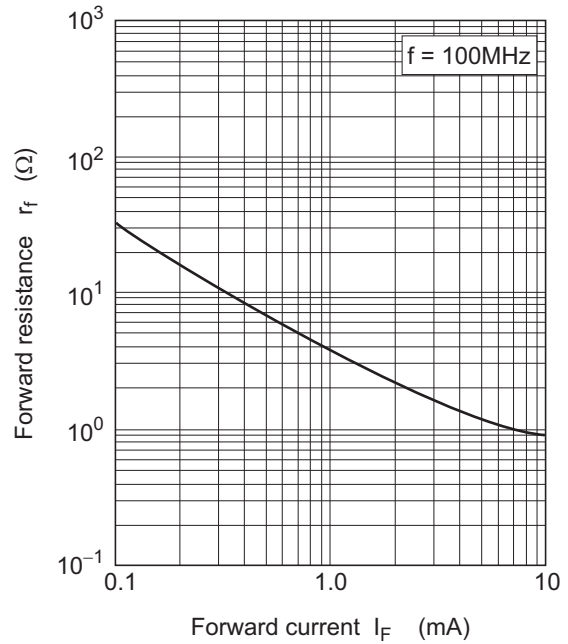


Fig.4 Forward resistance vs. Forward current

Main Characteristics (RKP201KN Series)

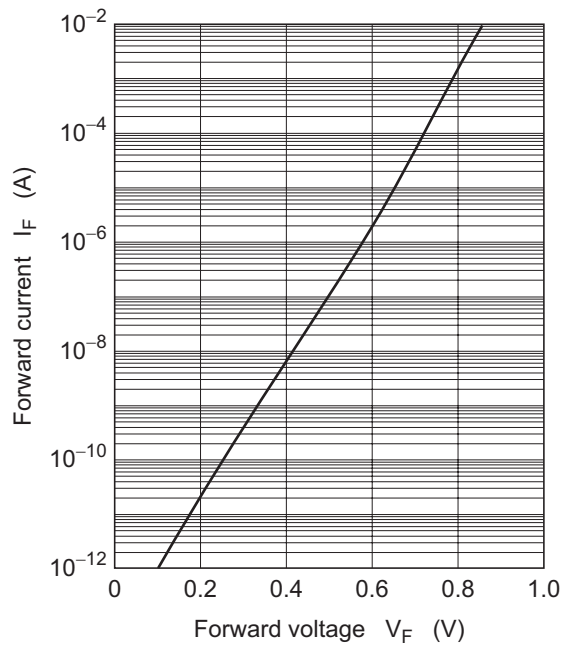


Fig.1 Forward current vs. Forward voltage

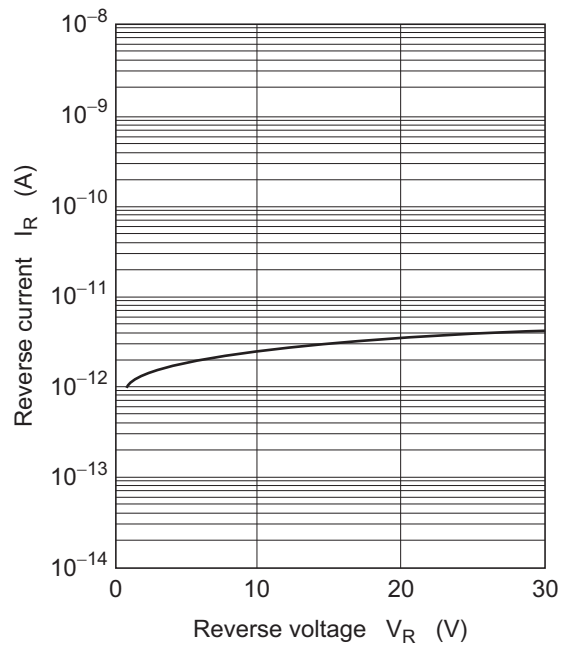


Fig.2 Reverse current vs. Reverse voltage

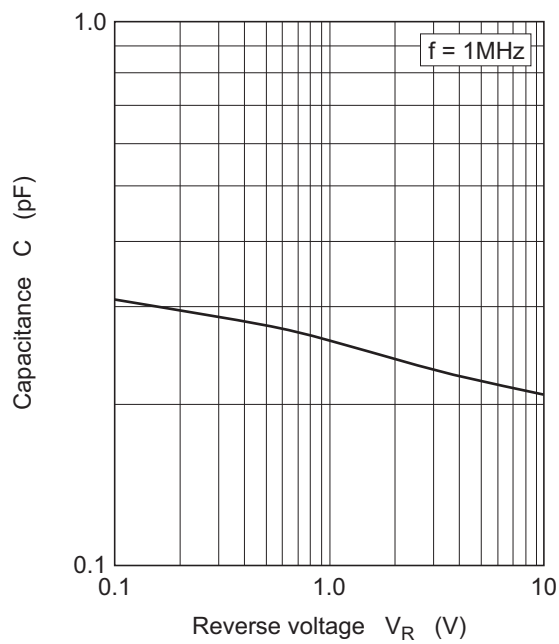


Fig.3 Capacitance vs. Reverse voltage

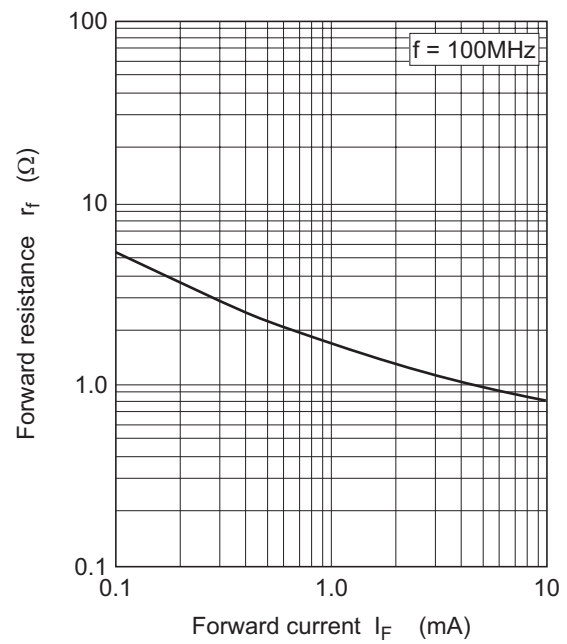
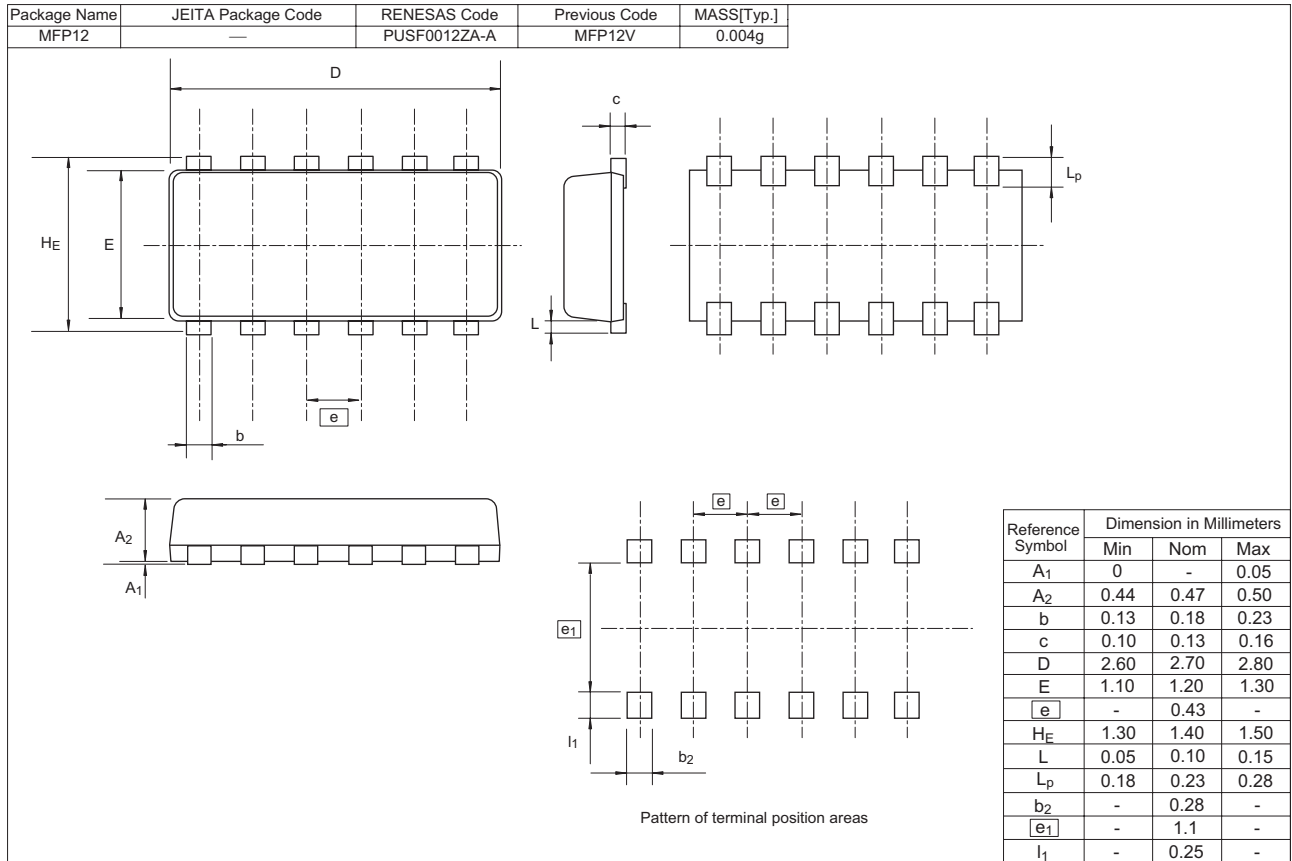


Fig.4 Forward resistance vs. Forward current

### Package Dimensions



Notes:

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