

# RKP400KS

## Composite Pin Diode for Antenna Switching

REJ03G1257-0200  
 Rev.2.00  
 Jul 03, 2006

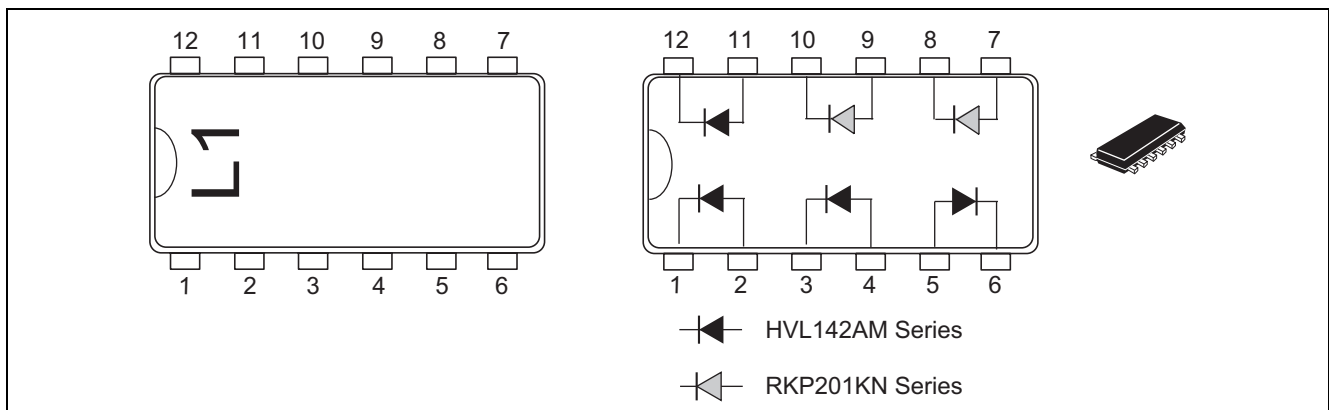
### Features

- 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 elements (MFP12) is suitable for surface mount design.

### Ordering Information

| Type No. | Laser Mark | Package Name | Package Code |
|----------|------------|--------------|--------------|
| RKP400KS | L1         | 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 (HVL142AM 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  | $\Omega$ | $I_F = 10\text{ mA}, f = 100\text{ MHz}$                                 |
| ESD-Capability *1  | —      | 100 | —   | —    | V        | C = 200 pF, R = 0 $\Omega$ , Both forward and reverse direction 1 pulse. |

## Electrical Characteristics (RKP201KN 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    | $V_F$  | —   | —   | 0.9  | V        | $I_F = 2\text{ mA}$  |
| 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 Characteristic (HVL142AM Series)

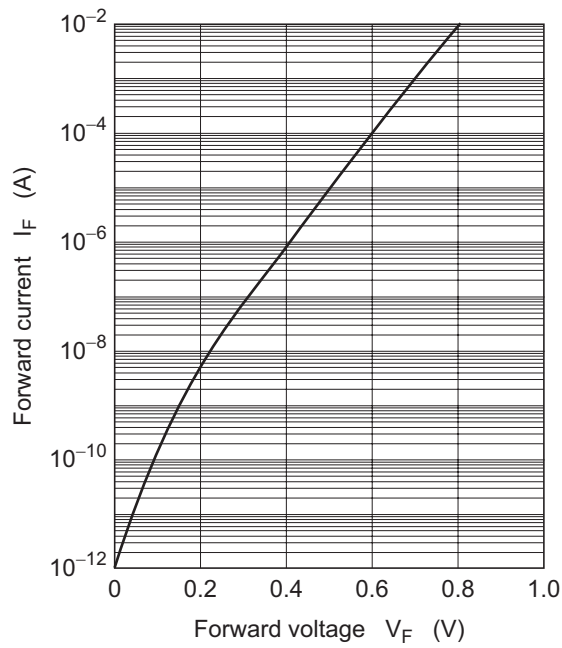


Fig.1 Forward current vs. Forward voltage

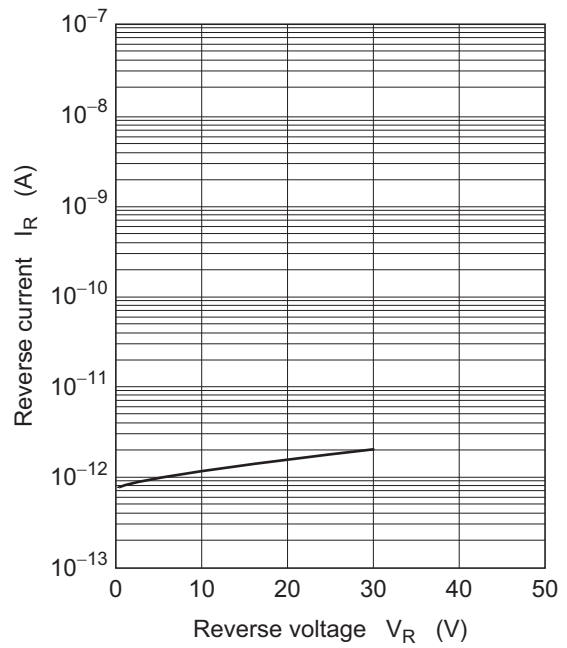


Fig.2 Reverse current vs. Reverse voltage

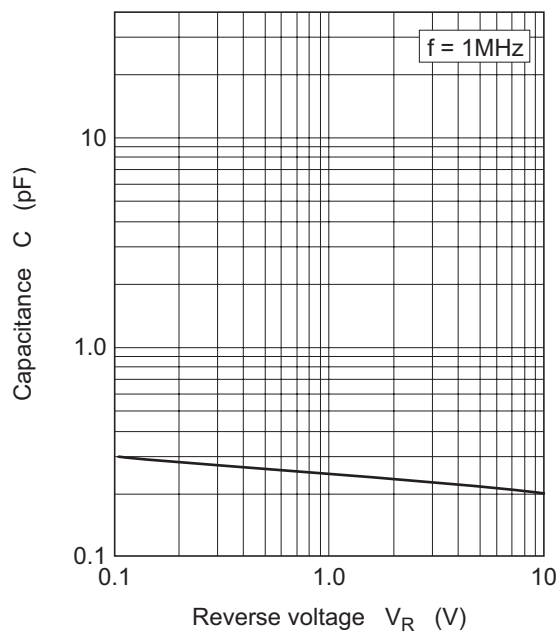


Fig.3 Capacitance vs. Reverse voltage

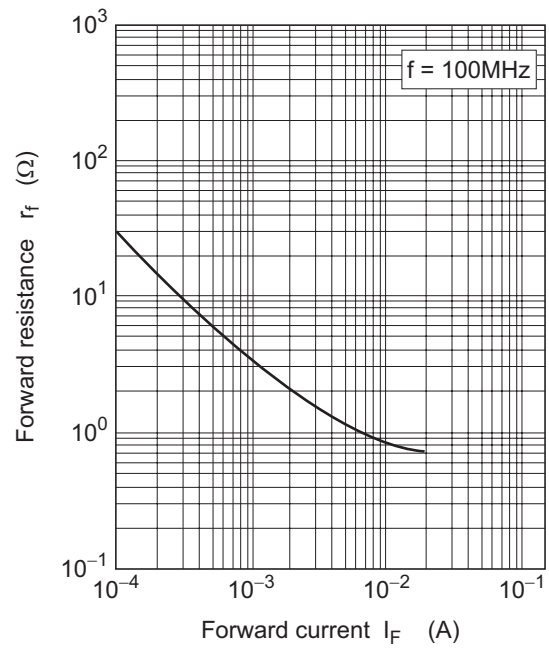


Fig.4 Forward resistance vs. Forward current

Main Characteristic (RKP201KN Series)

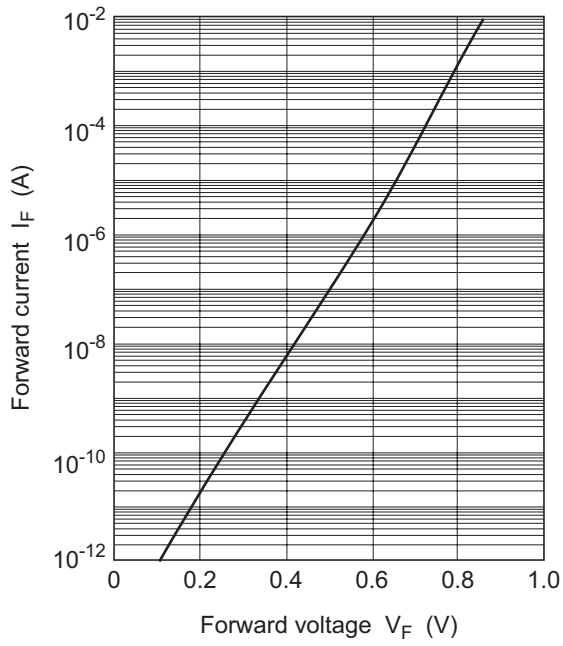


Fig.1 Forward current vs. Forward voltage

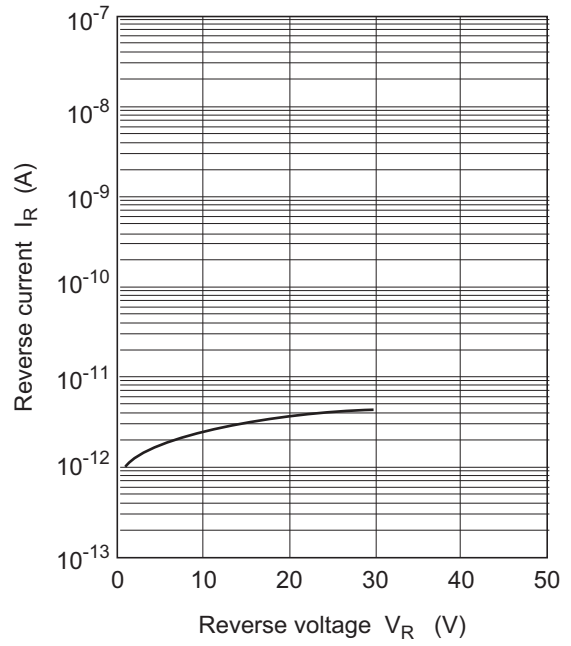


Fig.2 Reverse current vs. Reverse voltage

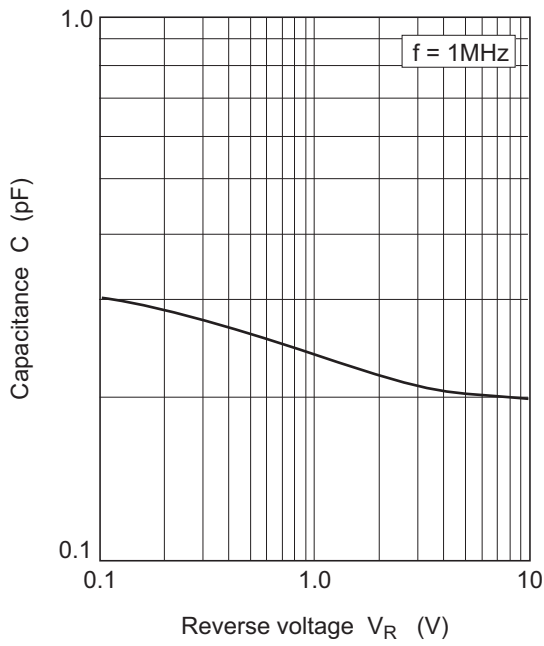


Fig.3 Capacitance vs. Reverse voltage

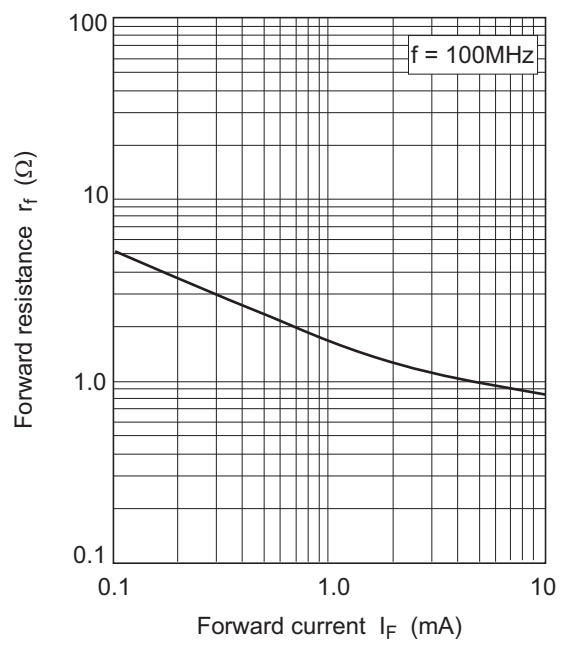
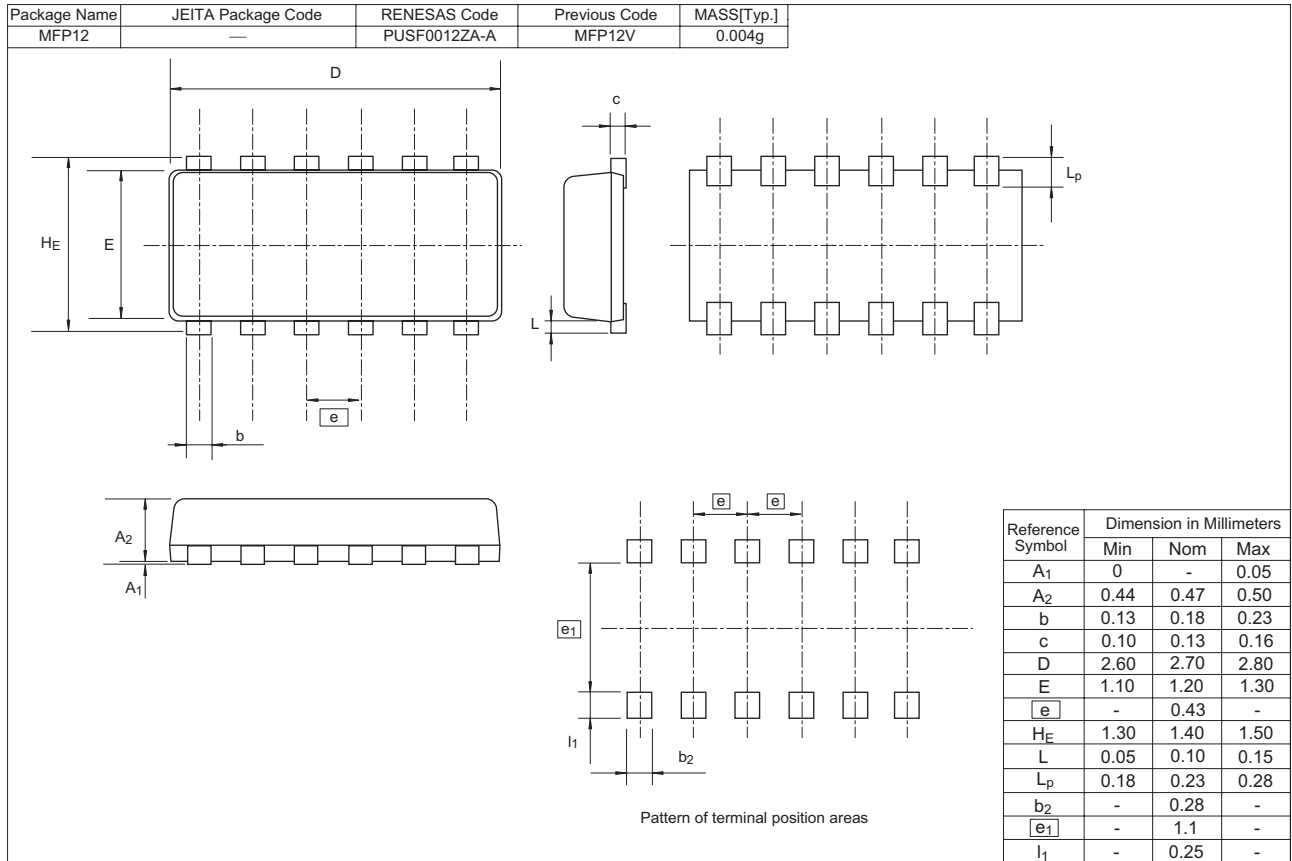


Fig.4 Forward resistance vs. Forward current

### Package Dimensions



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