

RKP409KS

Composite Pin Diode for Antenna Switching

REJ03G1501-0200
Rev.2.00
Jun 08, 2007

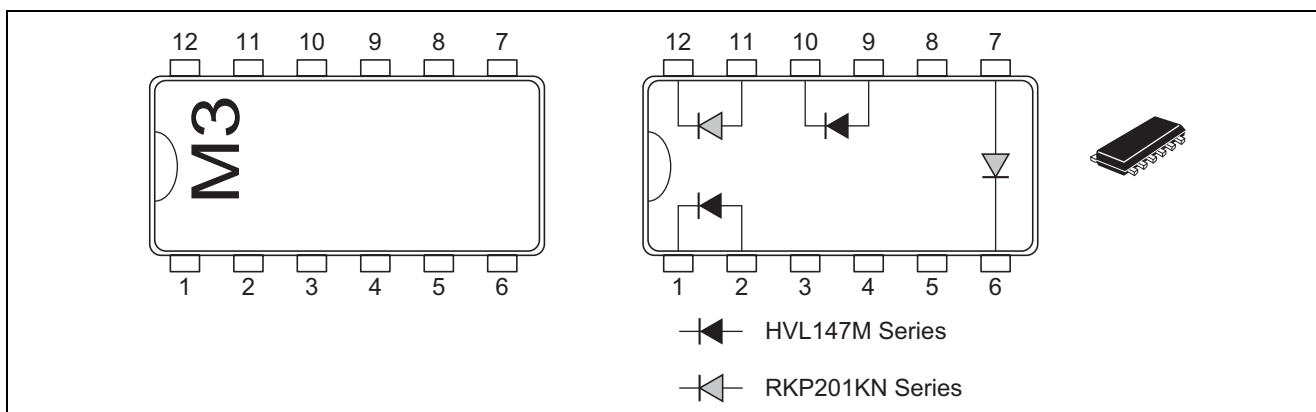
Features

- 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 four different kind of elements (MFP12) is suitable for surface mount design.

Ordering Information

Part No.	Laser Mark	Package Name	Package Code
RKP409KS	M3	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 (HVL147M 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	—	—	0.31	pF	$V_R = 1\text{ V}, f = 1\text{ MHz}$
Forward resistance	r_{f1}	—	—	2.5	Ω	$I_F = 2\text{ mA}, f = 100\text{ MHz}$
	r_{f2}	—	—	1.5	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 (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	Ω	$I_F = 2\text{ mA}, f = 100\text{ MHz}$
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. 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 (HVL147M Series)

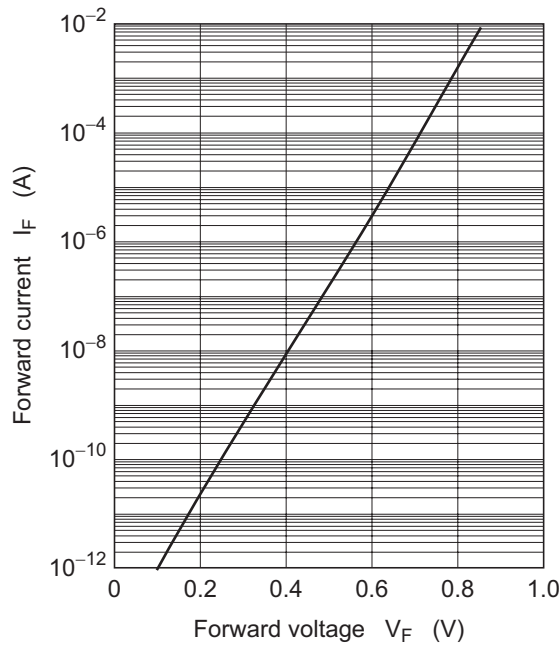


Fig.1 Forward current vs. Forward voltage

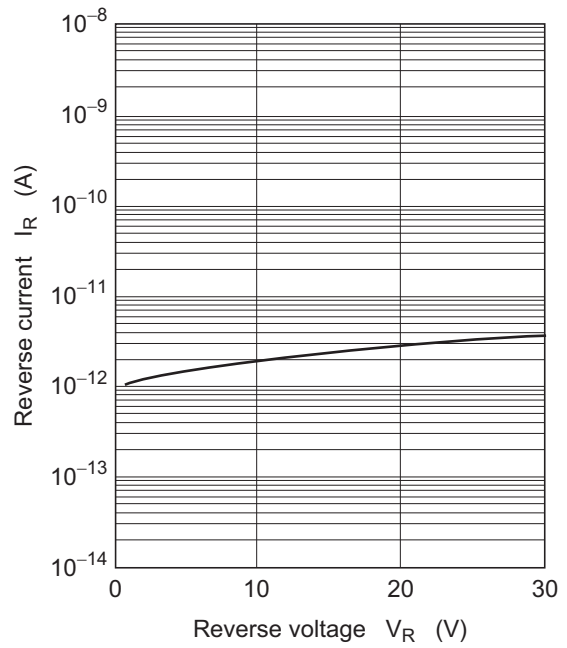


Fig.2 Reverse current vs. Reverse voltage

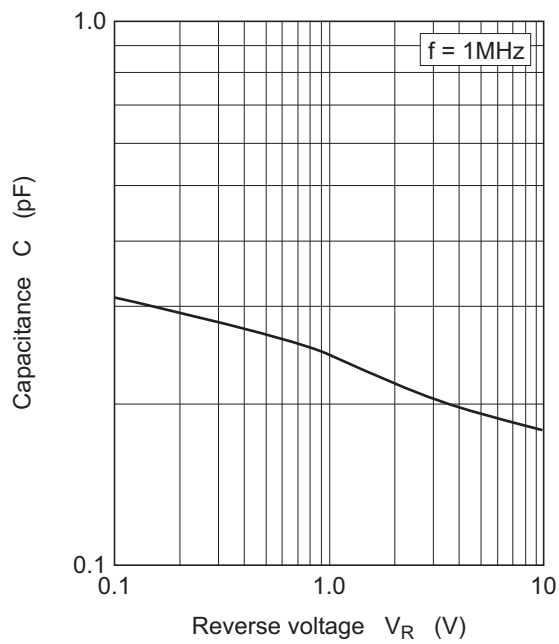


Fig.3 Capacitance vs. Reverse voltage

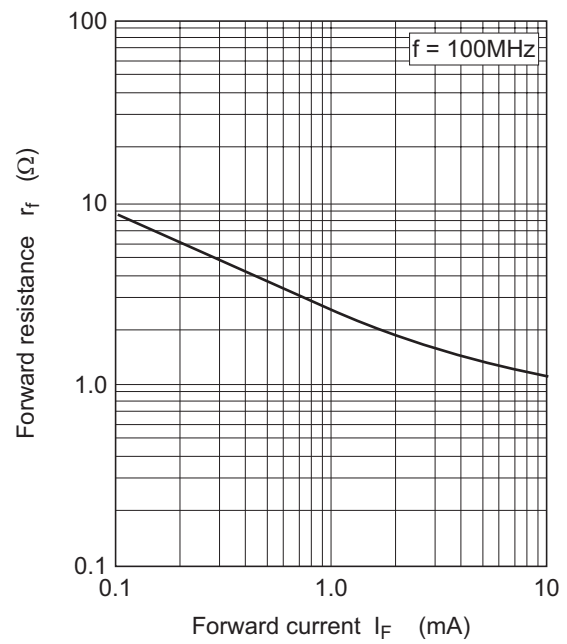


Fig.4 Forward resistance vs. Forward current

Main Characteristic (RKP201KN Series)

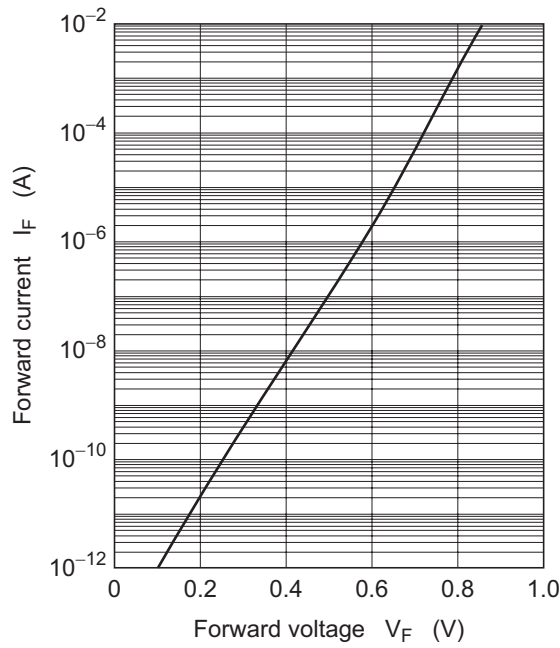


Fig.1 Forward current vs. Forward voltage

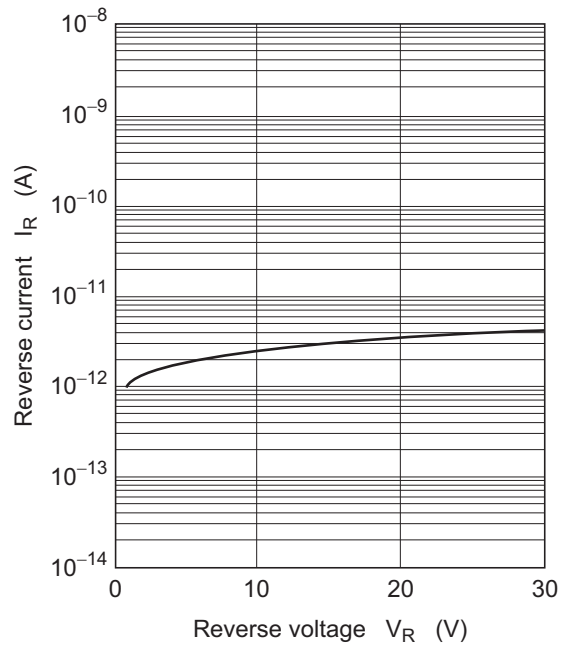


Fig.2 Reverse current vs. Reverse voltage

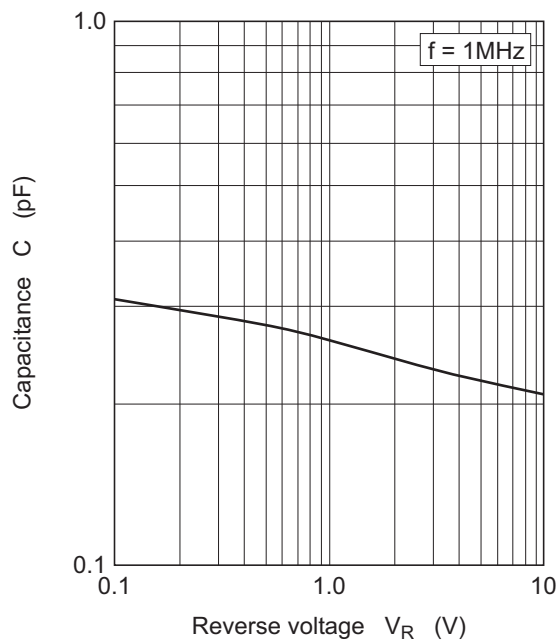


Fig.3 Capacitance vs. Reverse voltage

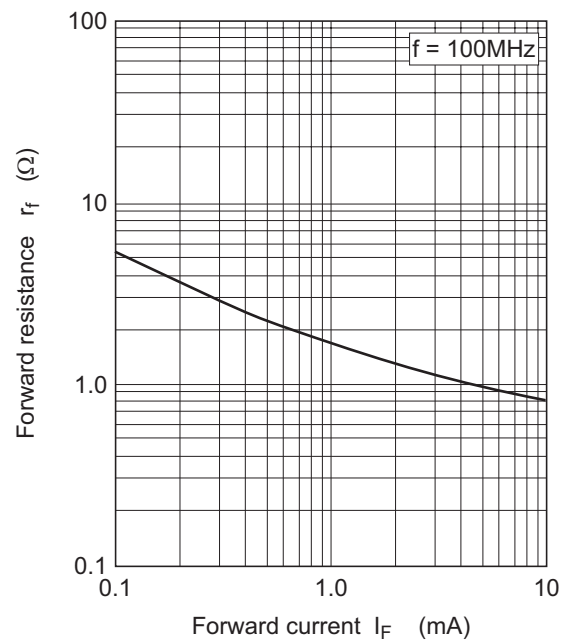
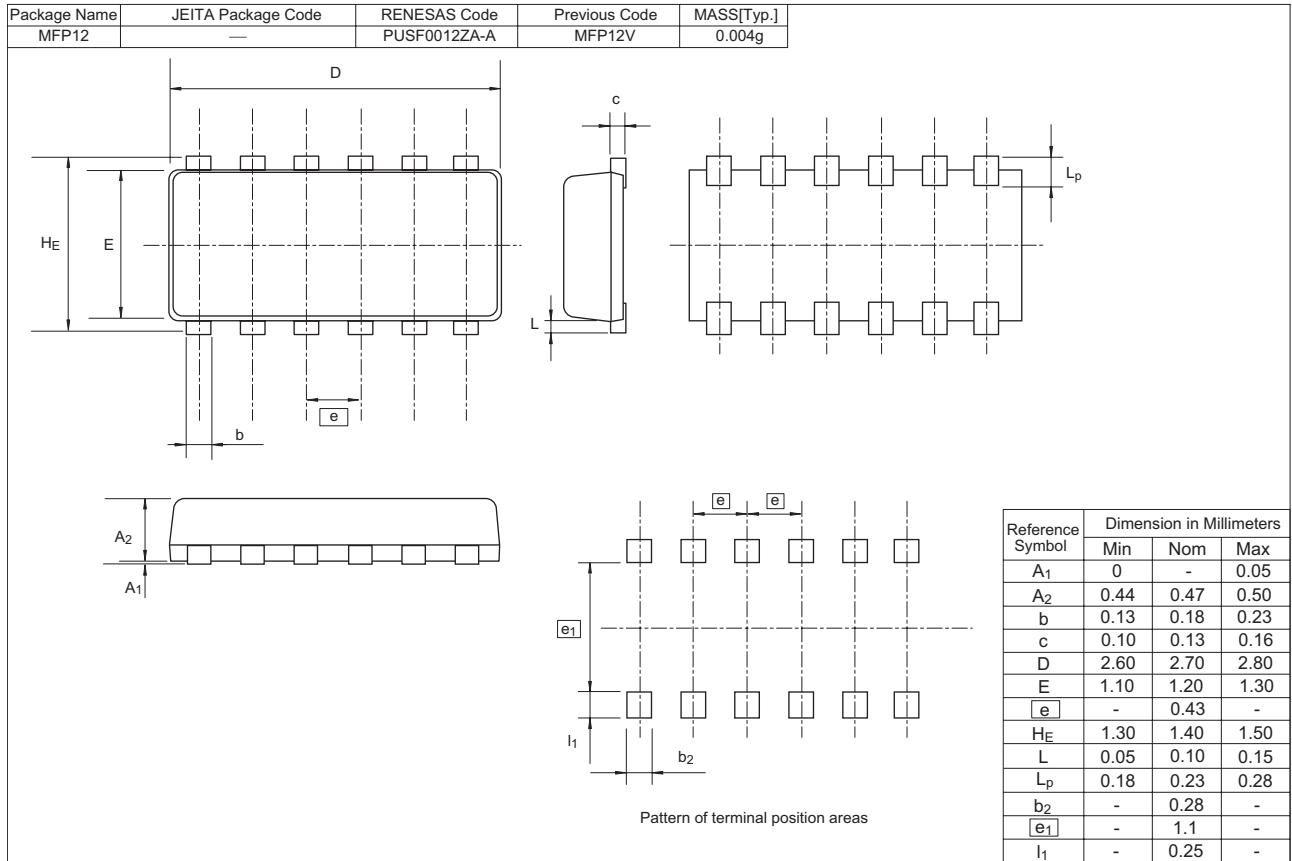


Fig.4 Forward resistance vs. Forward current

Package Dimensions



Notes:

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