RKP413KS

Composite Pin Diode for Antenna Switching

REJ03G1613-0100
Rev.1.00
Jan 10, 2008

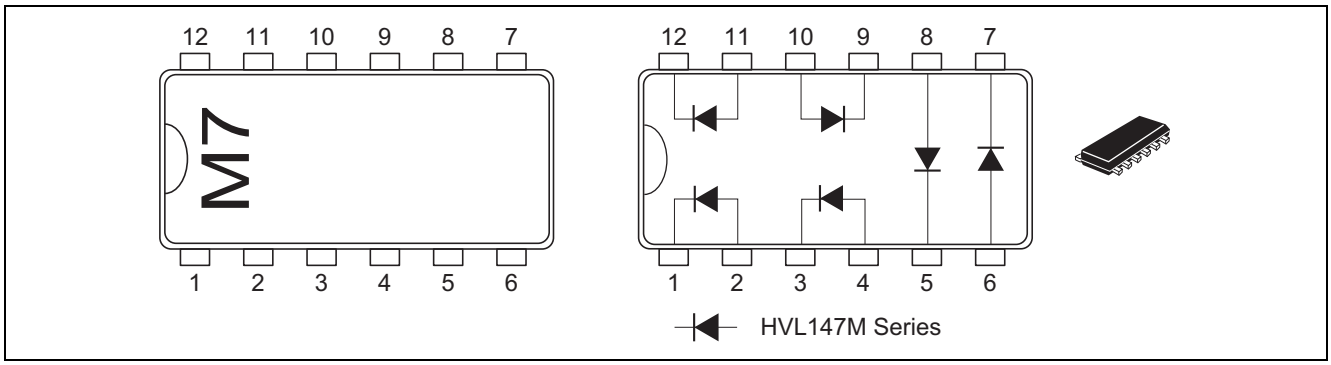
Features

- An optimal solution for antenna switching in mobile phones.
- Low capacitance. (C = 0.31 pF max)
- Low forward resistance. (rf = 1.5 Ω max @I_F = 10 mA, f = 100 MHz)
- Thin outline of diode array with six same kind of elements (MFP12) is suitable for surface mount design.

Ordering Information

Part No.	Laser Mark	Package Name	Package Code
RKP413KS	M7	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	Pd *	100	mW
Junction temperature	Tj	125	°C
Storage temperature	Tstg	–55 to +125	°C

Note: Per one device

Electrical Characteristics

(Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse current	I_R	—	—	100	nA	V_R = 30 V
Forward voltage	V_F	—	—	1.0	V	I_F = 10 mA
Capacitance	C	—	—	0.31	pF	V_R = 1 V, f = 1 MHz
Forward resistance	r_{f1}	—	—	2.5	Ω	I_F = 2 mA, f = 100 MHz
	r_{f2}	—	—	1.5	Ω	I_F = 10 mA, f = 100 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 nA at V_R = 30 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

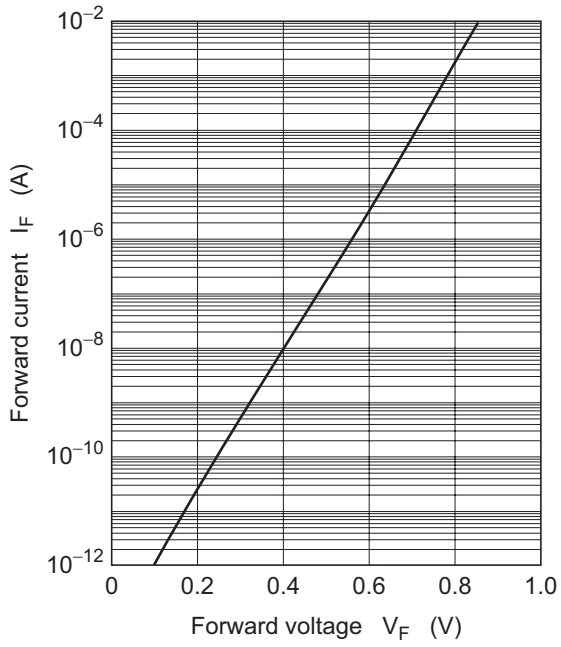


Fig.1 Forward current vs. Forward voltage

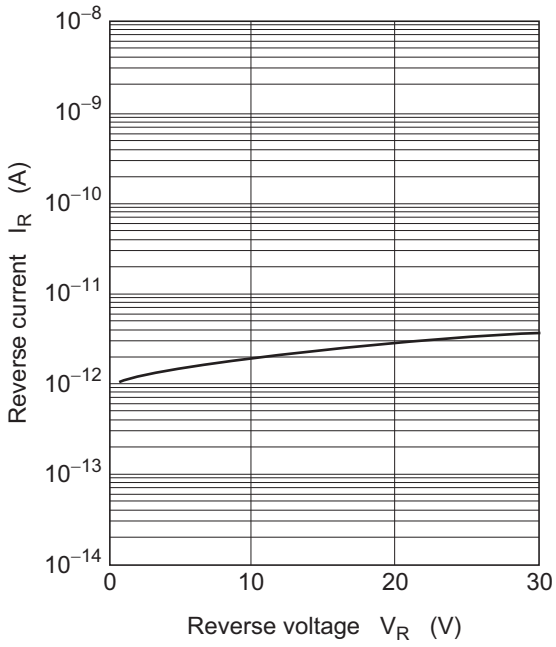


Fig.2 Reverse current vs. Reverse voltage

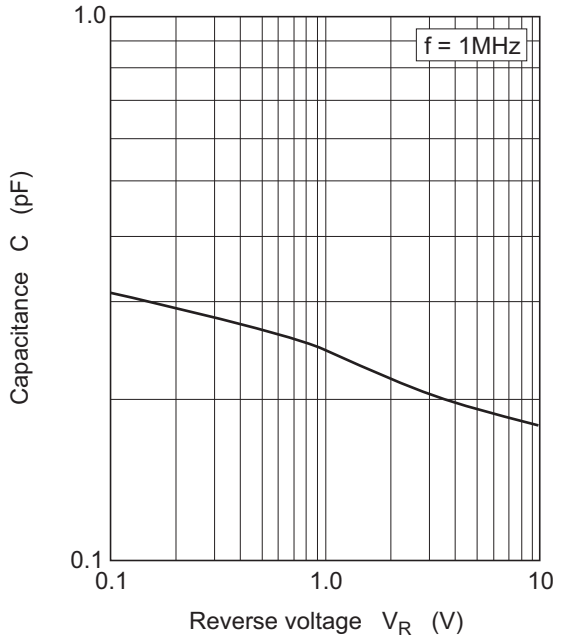


Fig.3 Capacitance vs. Reverse voltage

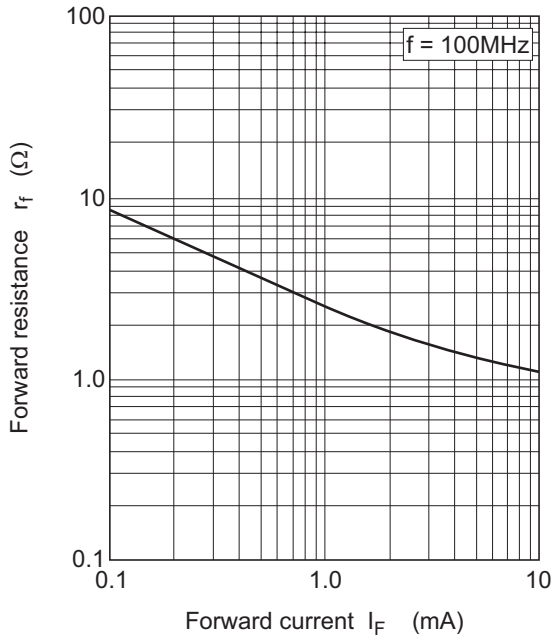
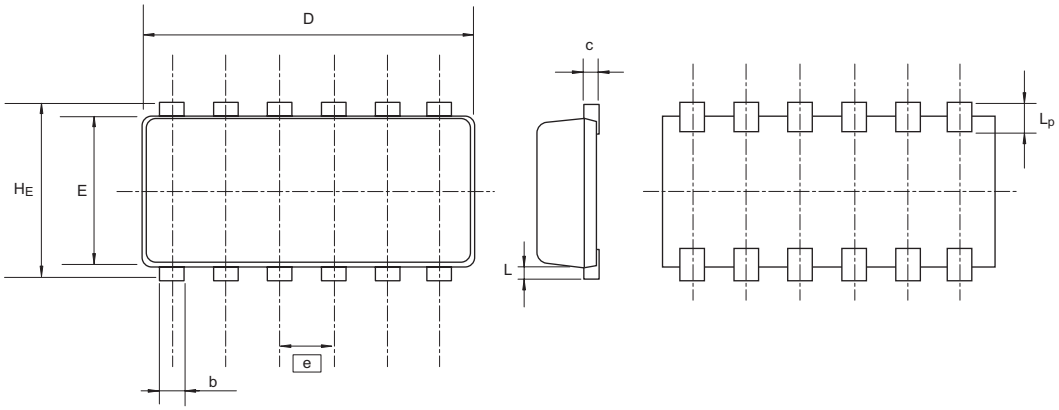
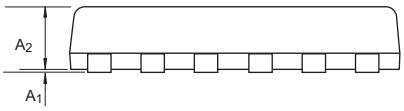


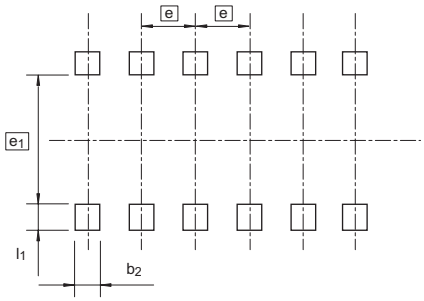
Fig.4 Forward resistance vs. Forward current

Package Dimensions

Package Name	JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
MFP12	—	PUSF0012ZA-A	MFP12V	0.004g







Pattern of terminal position areas

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
A_1	0	-	0.05
A_2	0.44	0.47	0.50
b	0.13	0.18	0.23
c	0.10	0.13	0.16
D	2.60	2.70	2.80
E	1.10	1.20	1.30
e	-	0.43	-
H_E	1.30	1.40	1.50
L	0.05	0.10	0.15
L_p	0.18	0.23	0.28
b_2	-	0.28	-
e_1	-	1.1	-
l_1	-	0.25	-

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Refer to "**http://www.renesas.com/en/network**" for the latest and detailed information.

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