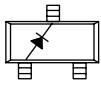


## PIN Diodes

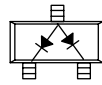
## SMP1320 Series (KMP1320 Series)

## ■ Features

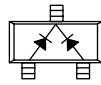
- Low Resistance 0.9Ω
- Low Capacitance 0.3pF
- Packages rated MSL1, 260°C per JEDEC J-STD-020)



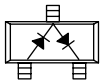
SMP1320-001  
SMP1320-001LF  
Ls = 1.5 nH



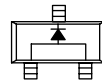
SMP1320-003  
SMP1320-003LF  
Ls = 1.5 nH



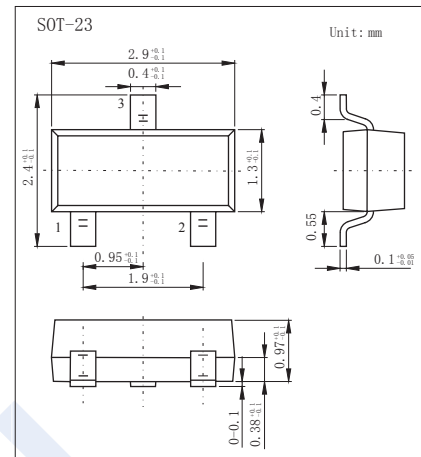
SMP1320-004  
SMP1320-004LF  
Ls = 1.5 nH



SMP1320-005  
SMP1320-005LF  
Ls = 1.5 nH



SMP1320-007  
SMP1320-007LF  
Ls = 0.4 nH



## ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Reverse Voltage	V <sub>R</sub>	50	V
Power Dissipation	P <sub>D</sub>	250	mW
Junction Temperature	T <sub>J</sub>	150	°C
Operating temperature	T <sub>A</sub>	-65 to 150	
Storage Temperature range	T <sub>stg</sub>	-65 to 150	

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V <sub>R</sub>	I <sub>R</sub> = 100 uA	50			V
Forward voltage	V <sub>F</sub>	I <sub>F</sub> = 10 mA		0.85		
Reverse voltage leakage current	I <sub>R</sub>	V <sub>R</sub> =50 V			10	uA
Series Resistance	R <sub>S</sub>	I=1 mA, F=100 MHz		2		Ω
		I=10 mA, F=100 MHz			0.9	
Capacitance between terminals	C <sub>T</sub>	V <sub>R</sub> =30 V, f= 1 MHz			0.3	pF
Carrier lifetime	T <sub>I</sub>	I <sub>F</sub> =10 mA		0.4		us
I region width				8		um

## PIN Diodes

## SMP1320 Series (KMP1320 Series)

## ■ Resistance vs Temperature @ 500 MHz

$I_F$ (mA)	$R_S$ @ -55°C ( $\Omega$ )	$R_S$ @ -15°C ( $\Omega$ )	$R_S$ @ +25°C ( $\Omega$ )	$R_S$ @ +65°C ( $\Omega$ )	$R_S$ @ +100°C ( $\Omega$ )
0.02	29.6	29.2	30.8	32.0	32.7
0.10	7.2	7.7	8.3	8.8	8.8
0.3	3.4	3.6	3.8	4.0	4.1
0.5	2.5	2.7	2.8	2.9	3.0
1.0	1.7	1.8	1.9	2.0	1.9
10	0.84	0.85	0.76	0.76	0.67
20	0.73	0.73	0.64	0.64	0.56
100	0.59	0.57	0.47	0.48	0.40

## ■ Marking

NO	SMP1320-001	SMP1320-003	SMP1320-004	SMP1320-005	SMP1320-007
	KMP1320-001	KMP1320-003	KMP1320-004	KMP1320-005	KMP1320-007
Marking	PL1	PL9	PL3	PL2	PLB

NO	SMP1320-001LF	SMP1320-003LF	SMP1320-004LF	SMP1320-005LF	SMP1320-007LF
	KMP1320-001LF	KMP1320-003LF	KMP1320-004LF	KMP1320-005LF	KMP1320-007LF
Marking	RL1	RL9	RL3	RL2	RLB

### PIN Diodes

### SMP1320 Series (KMP1320 Series)

■ Typical Characteristics

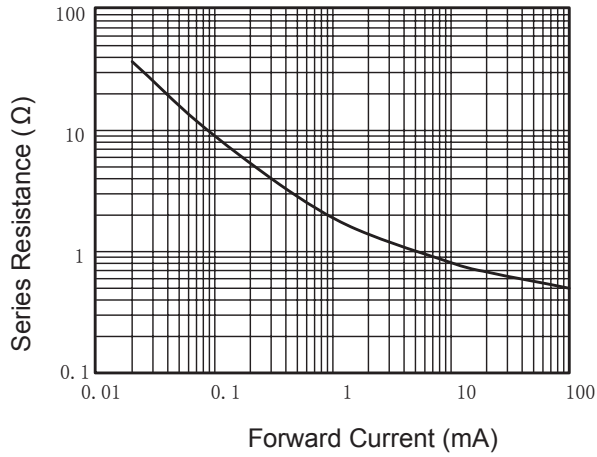


Figure 2. Series Resistance vs Current @ 100 MHz

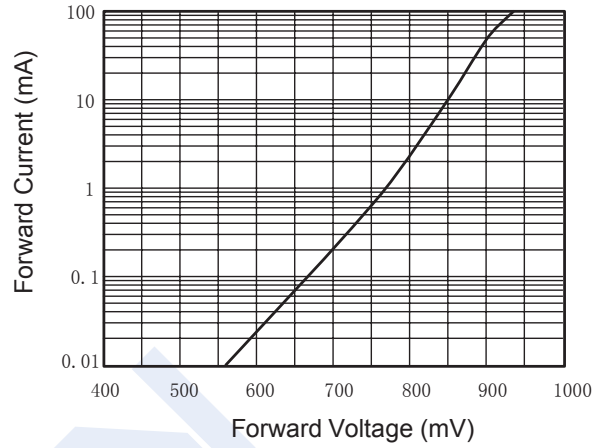


Figure 3. DC Characteristics

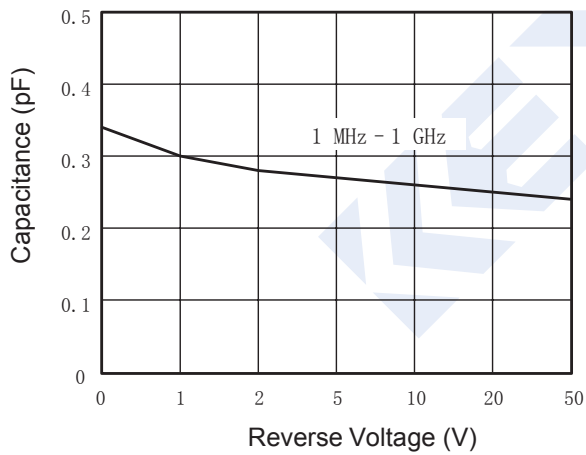


Figure 4. Capacitance vs Reverse Voltage

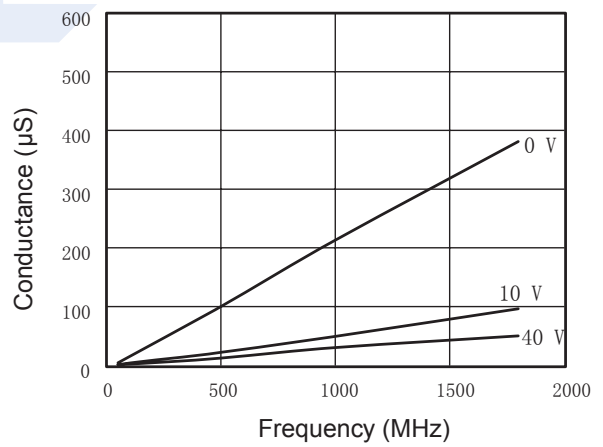


Figure 5. Conductance vs Frequency and Reverse Voltage