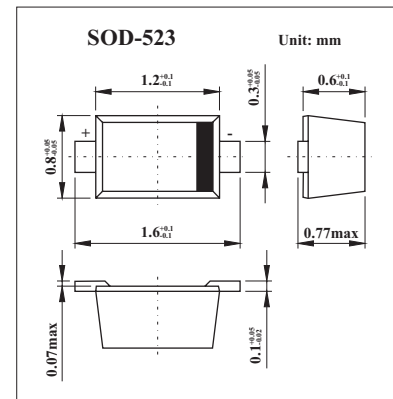


Silicon PIN diode

BAP63-02

■ Features

- High speed switching for RF signals
- Low diode capacitance
- Low diode forward resistance
- Very low series inductance.
- For applications up to 3 GHz.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min	Max	Unit
continuous reverse voltage	V_R		50	V
continuous forward current	I_F		100	mA
total power dissipation $T_s \leq 90^\circ\text{C}$	P_{tot}		715	mW
storage temperature	T_{stg}	-65	+150	$^\circ\text{C}$
junction temperature	T_j	-65	+150	$^\circ\text{C}$
thermal resistance from junction to soldering point	$R_{th\ j-s}$		85	K/W

BAP63-02

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Conditions	Typ	Max	Unit
forward voltage	V_F	$I_F = 50 \text{ mA}$	0.95	1.1	V
reverse leakage current	I_R	$V_R = 35 \text{ V}$		10	nA
diode capacitance	C_d	$V_R = 0; f = 1 \text{ MHz}$	0.36		pF
		$V_R = 1 \text{ V}; f = 1 \text{ MHz}$	0.32		
		$V_R = 20 \text{ V}; f = 1 \text{ MHz}$	0.25	0.32	
diode forward resistance	r_D	$I_F = 0.5 \text{ mA}; f = 100 \text{ MHz}; \text{note 1}$	2.5	3.5	Ω
		$I_F = 1 \text{ mA}; f = 100 \text{ MHz}; \text{note 1}$	1.95	3	
		$I_F = 10 \text{ mA}; f = 100 \text{ MHz}; \text{note 1}$	1.17	1.8	
		$I_F = 100 \text{ mA}; f = 100 \text{ MHz}; \text{note 1}$	0.9	1.5	
isolation	$ s_{21} ^2$	$V_R = 0; f = 900 \text{ MHz}$	15.6		dB
		$V_R = 0; f = 1800 \text{ MHz}$	10.3		
		$V_R = 0; f = 2450 \text{ MHz}$	8.3		
insertion loss	$ s_{21} ^2$	$V_R = 0.5; f = 900 \text{ MHz}$	0.19		dB
		$V_R = 0.5; f = 1800 \text{ MHz}$	0.24		
		$V_R = 0.5; f = 2450 \text{ MHz}$	0.28		
insertion loss	$ s_{21} ^2$	$V_R = 1; f = 900 \text{ MHz}$	0.16		dB
		$V_R = 1; f = 1800 \text{ MHz}$	0.20		
		$V_R = 1; f = 2450 \text{ MHz}$	0.25		
insertion loss	$ s_{21} ^2$	$V_R = 10; f = 900 \text{ MHz}$	0.10		dB
		$V_R = 10; f = 1800 \text{ MHz}$	0.16		
		$V_R = 10; f = 2450 \text{ MHz}$	0.20		
insertion loss	$ s_{21} ^2$	$V_R = 100; f = 900 \text{ MHz}$	0.09		dB
		$V_R = 100; f = 1800 \text{ MHz}$	0.14		
		$V_R = 100; f = 2450 \text{ MHz}$	0.18		
charge carrier life time	τ_L	when switched from $I_F = 10 \text{ mA}$ to $I_R = 6 \text{ mA}$; $R_L = 100 \Omega$; measured at $I_R = 3 \text{ mA}$	310		μs
series inductance	L_s	$I_F = 100 \text{ mA}; f = 100 \text{ MHz}$	0.6		nH

Note

1. Guaranteed on AQL basis: inspection level S4, AQL 1.0.

■ Marking

Marking	K5
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