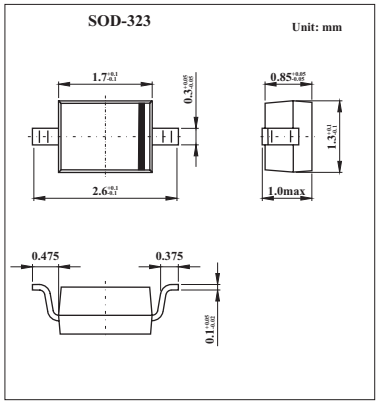
Silicon PIN diode

BAP65-03



Features

- High voltage, current controlled
- RF resistor for RF switches
- Low diode capacitance
- Low diode forward resistance (low loss)
- Very low series inductance.

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Min	Max	Unit
continuous reverse voltage	V_R		30	V
continuous forward current	I_F		100	mA
total power dissipation $T_S \leqslant 90$ ℃	P_{tot}		500	mW
storage temperature	T_{stg}	-65	+150	℃
junction temperature	T_j	-65	+150	℃
thermal resistance from junction to soldering point	$R_{th\ j\text{-}s}$		120	K/W

BAP65-03

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Conditions	Typ	Max	Unit
forward voltage	V_F	I_F = 50 mA	0.95	1.1	V
reverse leakage current	I_R	V_R = 20 V		20	nA
diode capacitance	C_d	V_R = 0; f = 1 MHz	0.65		pF
		V_R = 1 V; f = 1 MHz	0.55	0.9	
		V_R = 3 V; f = 1 MHz	0.5	0.8	
		V_R = 20V; f = 1 MHz	0.375		
diode forward resistance	r_D	I_F = 1 mA; f = 100 MHz; note 1	1		Ω
		I_F = 5 mA; f = 100 MHz; note 1	0.65	0.95	
		I_F = 10 mA; f = 100 MHz; note 1	0.56	0.9	
		I_F = 100 mA; f = 100 MHz	0.35		
isolation	$\|s21\|^2$	V_R = 0; f = 900 MHz	10.2		dB
		V_R = 0; f = 1800 MHz	5.8		
		V_R = 0; f = 2450 MHz	4.1		
insertion loss	$\|s21\|^2$	V_R = 1; f = 900 MHz	0.1		dB
		V_R = 1; f = 1800 MHz	0.14		
		V_R = 1; f = 2450 MHz	0.18		
insertion loss	$\|s21\|^2$	V_R = 5; f = 900 MHz	0.06		dB
		V_R = 5; f = 1800 MHz	0.1		
		V_R = 5; f = 2450 MHz	0.14		
insertion loss	$\|s21\|^2$	V_R = 10; f = 900 MHz	0.06		dB
		V_R = 10; f = 1800 MHz	0.1		
		V_R = 10; f = 2450 MHz	0.13		
insertion loss	$\|s21\|^2$	V_R = 100; f = 900 MHz	0.05		dB
		V_R = 100; f = 1800 MHz	0.1		
		V_R = 100; f = 2450 MHz	0.14		
charge carrier life time	τ_L	when switched from I_F = 10 mA to I_R = 6 mA; R_L = 100 Ω ;measured at I_R = 3 mA	0.17		μs
series inductance	L_S	I_F = 100 mA; f = 100 MHz	1.5		nH

Note

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

■ Marking

Marking	D3