

## Silicon PIN diode

## BAP64-05

## ■ Features

- High voltage, current controlled
- RF resistor for RF attenuators and switches
- Low diode capacitance
- Low diode forward resistance
- 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	$V_R$		175	V
continuous forward current	$I_F$		100	mA
total power dissipation	$P_{tot}$		250	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	$R_{th\ j-s}$		220	K/W

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
forward voltage	$V_F$	$I_F = 50\text{ mA}$		0.95	1.1	V
reverse leakage current	$V_R$	$V_R = 175\text{ V}$			10	$\mu\text{ A}$
		$V_R = 20\text{ V}$			1	$\mu\text{ A}$
diode capacitance	$C_d$	$V_R = 0; f = 1\text{ MHz}$		0.52		pF
		$V_R = 1\text{ V}; f = 1\text{ MHz}$		0.37	0.5	
		$V_R = 20\text{ V}; f = 1\text{ MHz}$		0.23	0.35	
diode forward resistance	$r_D$	$I_F = 0.5\text{ mA}; f = 100\text{ MHz}; \text{note 1}$		20	40	$\Omega$
		$I_F = 1\text{ mA}; f = 100\text{ MHz}; \text{note 1}$		10	20	
		$I_F = 10\text{ mA}; f = 100\text{ MHz}; \text{note 1}$		2	3.8	
		$I_F = 100\text{ mA}; f = 100\text{ MHz}; \text{note 1}$		0.7	1.35	
charge carrier life time	$\tau_L$	when switched from $I_F = 10\text{ mA}$ to $I_R = 6\text{ mA}; R_L = 100\ \Omega$ , measured at $I_R = 3\text{ mA}$		1.55		$\mu\text{ S}$
series inductance	$L_s$			1.4		nH

Note

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

## ■ Marking

Marking	5Kp
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