

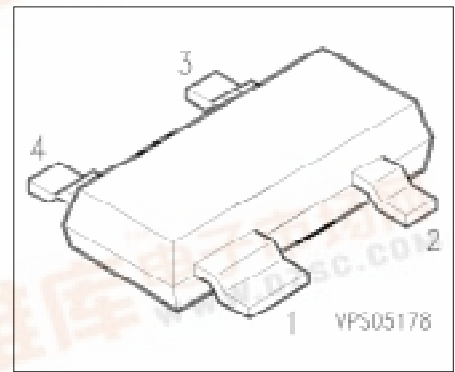
# SIEMENS

## Silicon Crossover Ring Quad Schottky Diode

BAT 114-099R

### Features

- High barrier diode for double balanced mixers, phase detectors and modulators



**ESD:** ElectroStatic Discharge sensitive device, observe handling precautions!

Type	Marking	Ordering Code (taped)	Pin Configuration	Package <sup>1)</sup>
BAT 114-099R	14s	Q62702-A1006	<p>EHA07012</p>	SOT-143

<sup>1)</sup> Dimensions see chapter **Package Outlines**

### Maximum Ratings (per diode)

Parameter	Symbol	Limit Values	Unit
Forward current	$I_F$	90	mA
Operation temperature	$T_{op}$	- 55 to + 150	°C
Storage temperature	$T_{stg}$	- 55 to + 150	°C
Power dissipation, $T_S \leq 70 \text{ °C}$	$P_{tot}$	100	mW



## Thermal Resistance

(per diode)

Parameter	Symbol	Limit Values	Unit
Junction to soldering point	$R_{thJS}$	$\leq 780$	K/W
Junction to ambient <sup>1)</sup>	$R_{thJA}$	$\leq 1020$	K/W

<sup>1)</sup> Mounted on alumina 15 mm × 16.7 mm to 0.7 mm

## Electrical Characteristics

(per diode;  $T_A = 25\text{ °C}$ )

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Forward voltage $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$	$V_F$	–	0.58 0.68	0.7 0.78	V
Forward voltage matching <sup>1)</sup> $I_F = 10\text{ mA}$	$\Delta V_F$	–	–	20	mV
Diode capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_T$	–	0.25	–	pF
Forward resistance $I_F = 10\text{ mA} / 50\text{ mA}$	$R_F$	–	5.5	–	$\Omega$

<sup>1)</sup>  $\Delta V_F$  is difference between lowest and highest  $V_F$  in component.

## Forward Current $I_F = f(V_F)$

