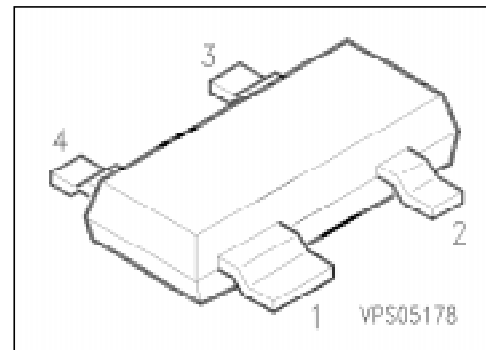


## Silicon Crossover Ring Quad Schottky Diode

BAT 15-099R

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



**ESD:** Electrostatic discharge sensitive device, observe handling precautions!

Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package <sup>1)</sup>
BAT 15-099R	S6	Q62702-A0043		SOT-143

### Maximum Ratings per Diode

Parameter	Symbol	Values	Unit
Forward current	$I_F$	110	mA
Power dissipation, $T_s \leq 70\text{ °C}$	$P_{tot}$	100	mW
Storage temperature range	$T_{stg}$	- 55 ... + 150	°C
Operating temperature range	$T_{op}$	- 55 ... + 150	

### Thermal Resistance per Diode

Junction – ambient <sup>2)</sup>	$R_{th JA}$	$\leq 1020$	K/W
Junction – soldering point	$R_{th JS}$	$\leq 780$	

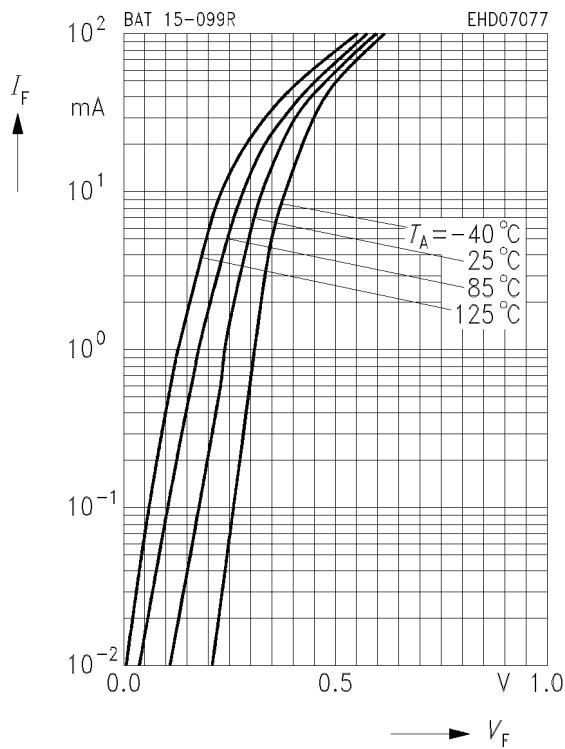
<sup>1)</sup> For detailed information see chapter Package Outlines.

<sup>2)</sup> Package mounted on alumina 15 mm × 16.7 mm to 0.7 mm.

**Electrical Characteristics per Diode**  
at  $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise specified.

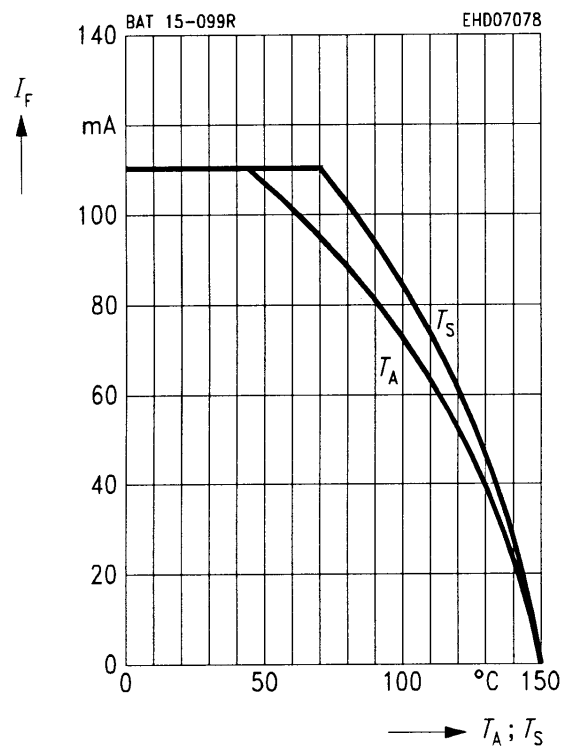
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Forward voltage $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$	$V_F$	–	0.23 0.32	–	V
Forward voltage matching <sup>1)</sup> $I_F = 10\text{ mA}$	$\Delta V_F$	–	–	20	mV
Diode capacitance $V_R = 0, f = 1\text{ MHz}$	$C_T$	–	0.38	–	pF
Forward resistance $I_F = 10\text{ mA} / 50\text{ mA}$	$R_F$	–	5.5	–	$\Omega$

**Forward current  $I_F = f(V_F)$**



**Forward current  $I_F = f(T_S; T_A^*)$**

\*Package mounted on alumina



1)  $\Delta V_F$  is the difference between the lowest and the highest  $V_F$  in the component.