Silicon Schottky Diode

Crossover Ring Quad Diode Set

BAT14-099R

90mA/100mW

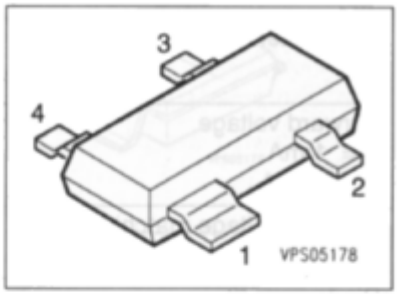
DATASHEET

OEM – Siemens

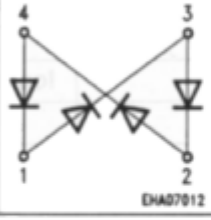
Source: Siemens Databook 1997

Silicon Crossover Ring Quad Schottky Diode — BAT 14-099R

- Medium 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[1]
BAT 14-099R	S8	Q62702-A0042		SOT-143

Maximum Ratings per Diode

Parameter	Symbol	Values	Unit
Forward current	I_F	90	mA
Power dissipation, $T_S \leq 70$ °C	P_{tot}	100	mW
Storage temperature range	T_{stg}	– 55 … + 150	°C
Operating temperature range	T_{op}	– 55 … + 150	

Thermal Resistance per Diode

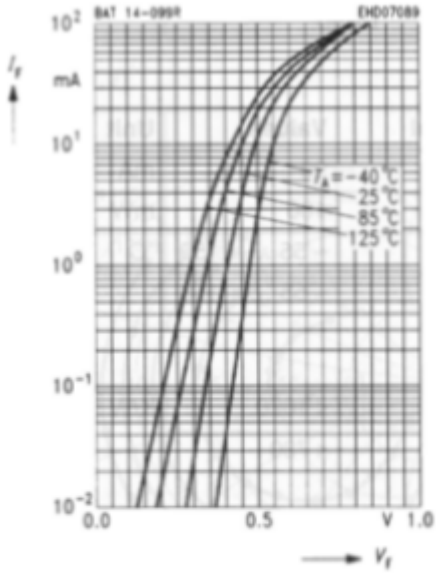
Junction – ambient[2]	$R_{th\,JA}$	≤ 1020	K/W
Junction – soldering point	$R_{th\,JS}$	≤ 780	

1) For detailed information see chapter Package Outlines.
2) Package mounted on alumina 15 mm × 16.7 mm to 0.7 mm.

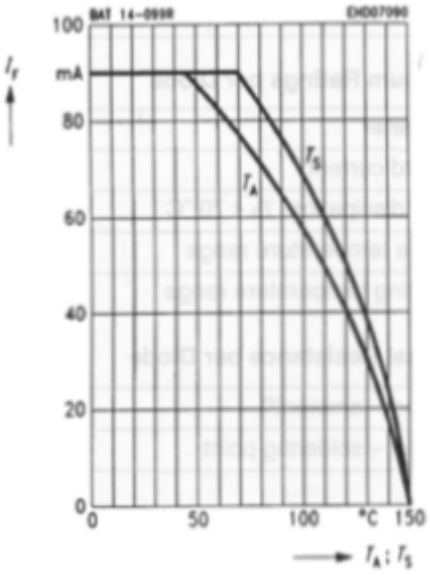
Electrical Characteristics per Diode
at T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Forward voltage I_F = 1 mA I_F = 10 mA	V_F	 – –	 0.4 0.48	 – –	V
Forward voltage matching[1] I_F = 10 mA	ΔV_F	–	–	20	mV
Diode capacitance V_R = 0, f = 1 MHz	C_T	–	0.38	–	pF
Forward resistance I_F = 10 mA / 50 mA	R_F	–	5.5	–	Ω

Forward current $I_F = f(V_F)$



Forward current $I_F = f(T_S; T_A^*)$
*Package mounted on alumina



[1] ΔV_F is the difference between the lowest and the highest V_F in the component.