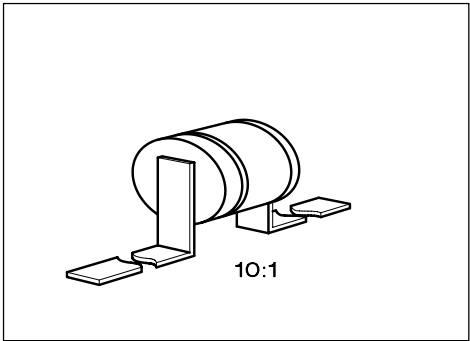


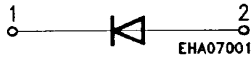
Silicon Schottky Diodes

BAT 15- ... 4

- Low barrier diodes
- For mixer applications
- Hermetically sealed ceramic packages
- For frequencies up to 40 GHz



ESD: Electrostatic discharge sensitive device, observe handling precautions!

Type	Frequency band (GHz)	Ordering Code	Pin Configuration	Package ¹⁾
BAT 15-014	... 4 (S)	Q62702-D3429	Cathode: black dot, heat sink 	T1
BAT 15-044	... 8 (C)	Q62702-D3431		
BAT 15-074	... 12.4 (X)	Q62702-D3433		
BAT 15-104	... 18 (Ku)	Q62702-D3435		
BAT 15-124	... 40 (Ka)	Q62702-D3437		

Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse voltage	V_R	3	V
Forward current BAT 15-014 ... BAT 15-044 BAT 15-074 ... BAT 15-124	I_F	100 50	mA
Junction temperature	T_j	175	°C
Storage temperature range	T_{stg}	– 65 ... + 150	
Operating temperature range	T_{op}	– 65 ... + 150	

1) For detailed information see chapter Package Outlines.

Electrical Characteristicsat $T_A = 25\text{ °C}$, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_R = 10\text{ }\mu\text{A}$	$V_{(BR)}$	3	—	—	V
Forward voltage $I_F = 1\text{ mA}$	V_F				V
BAT 15-014		—	0.26	—	
BAT 15-044		—	0.28	—	
BAT 15-074		—	0.29	—	
BAT 15-104		—	0.30	—	
BAT 15-124		—	0.31	—	
$I_F = 10\text{ mA}$					
BAT 15-014		—	0.35	—	
BAT 15-044		—	0.39	—	
BAT 15-074		—	0.42	—	
BAT 15-104		—	0.44	—	
BAT 15-124		—	0.45	—	
Diode capacitance $f = 1\text{ MHz}$, $V_R = 0$	C_T				pF
BAT 15-014		—	0.25	0.35	
BAT 15-044		—	0.20	0.25	
BAT 15-074		—	0.17	0.20	
BAT 15-104		—	0.13	0.15	
BAT 15-124		—	0.10	0.12	
Case capacitance	C_C	—	0.1	—	
Noise figure (single sideband) IF amplifier noise $F_{IF} = 1.5\text{ dB}$, $P_{LO} = 3\text{ dBm}$, $f_{IF} = 10.7\text{ MHz}$	F_{SSB}				dB
$f = 3\text{ GHz}$ BAT 15-014		—	5.5	—	
$f = 6\text{ GHz}$ BAT 15-044		—	5.5	—	
$f = 9.7\text{ GHz}$ BAT 15-074		—	5.5	—	
$f = 16\text{ GHz}$ BAT 15-104		—	6.0	—	
BAT 15-124		—	9.0	—	
Differential forward resistance $I_F = 10/50\text{ mA}$	r_f				Ω
BAT 15-014		—	3.0	—	
BAT 15-044		—	3.5	—	
BAT 15-074		—	4.5	—	
BAT 15-104		—	5.5	—	
BAT 15-124		—	8.0	—	