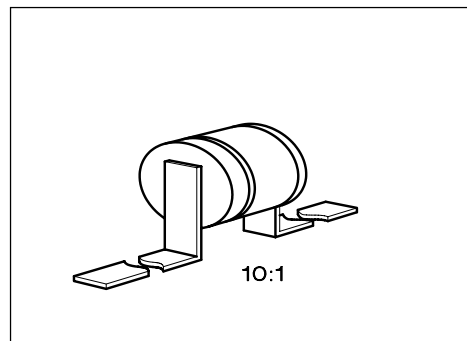


## Silicon Schottky Diodes

## 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 <sup>1)</sup>
BAT 15-014	... 4 (S)	Q62702-D3429		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	$I_F$	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 Characteristics

at  $T_A = 25\text{ °C}$ , 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 $I_F = 10/50\text{ mA}$	$r_f$				$\Omega$	
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	–			