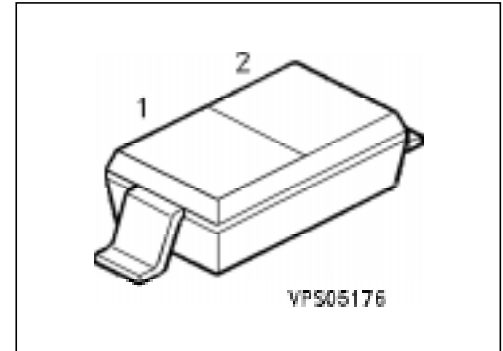


## Silicon Variable Capacitance Diode

BB 419

- For VHF tuned circuit applications



Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package <sup>1)</sup>
BB 419	white 2	Q62702-B499		SOD-123

### Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse voltage	$V_R$	28	V
Peak reverse voltage	$V_{RM}$	30	
Forward current, $T_A \leq 60\text{ °C}$	$I_F$	20	mA
Operating temperature range	$T_{op}$	- 55 ... + 125	°C
Storage temperature range	$T_{stg}$	- 55 ... + 150	

### Thermal Resistance

Junction - ambient	$R_{th\ JA}$	$\leq 450$	K/W
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<sup>1)</sup> For detailed information see chapter Package Outlines.

## Electrical Characteristics

at  $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Reverse current $V_R = 28\text{ V}$ $V_R = 28\text{ V}, T_A = 60\text{ }^\circ\text{C}$	$I_R$	– –	– –	20 200	nA
Diode capacitance, $f = 1\text{ MHz}$ $V_R = 3\text{ V}$ $V_R = 25\text{ V}$	$C_T$	26 4.3	– –	32 6	pF
Capacitance ratio $f = 1\text{ MHz}, V_R = 3\text{ V}, 25\text{ V}$	$C_{T3} / C_{T25}$	5	–	6.5	–
Capacitance matching $V_R = 3\text{ V} \dots 25\text{ V}$	$\Delta C_T / C_T$	–	–	3	%
Series resistance $f = 100\text{ MHz}, C_T = 12\text{ pF}$	$r_s$	–	0.35	0.5	$\Omega$
Figure of merit $f = 50\text{ MHz}, V_R = 3\text{ V}$ $f = 200\text{ MHz}, V_R = 25\text{ V}$	$Q$	–	280 600	–	–

## Diode capacitance $C_T = f(V_R)$

