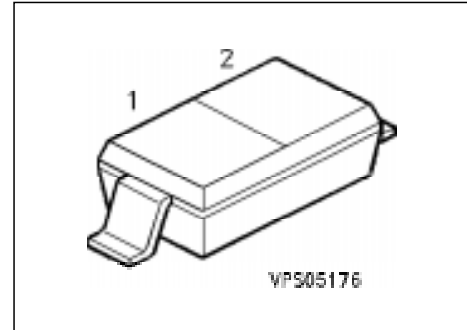


Silicon Variable Capacitance Diode

BB 811

- Frequency range up to 2 GHz;
special design for use in TV-sat indoor units



Type	Marking	Ordering Code (tape and reel)	Pin Configuration	Package ¹⁾
BB 811	white T	Q62702-B478		SOD-123

Maximum Ratings

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

Thermal Resistance

Junction - ambient	$R_{th JA}$	≤ 450	K/W
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¹⁾ 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 $V_R = 30\text{ V}$ $V_R = 30\text{ V}, T_A = 85\text{ }^\circ\text{C}$	I_R	–	–	20 500	nA
Diode capacitance, $f = 1\text{ MHz}$ $V_R = 1\text{ V}$ $V_R = 28\text{ V}$	C_T	7.8 0.85	8.8 1.02	9.8 1.2	pF
Capacitance ratio $f = 1\text{ MHz}, V_R = 1\text{ V}/28\text{ V}$	$\frac{C_{T1}}{C_{T28}}$	7.8	8.6	9.5	–
Series resistance $f = 100\text{ MHz}, C_T = 9\text{ pF}$	r_s	–	1	–	Ω
Case capacitance $f = 1\text{ MHz}$	C_C	–	0.1	–	pF
Capacitance matching $f = 1\text{ MHz}, V_R = 0.5 \dots 28\text{ V}$	$\frac{\Delta C_T}{\bar{C}}$	–	–	3	%
Series inductance	L_s	–	2.8	–	nH

Diode capacitance $C_T = f(V_R)$

$f = 1\text{ MHz}$

