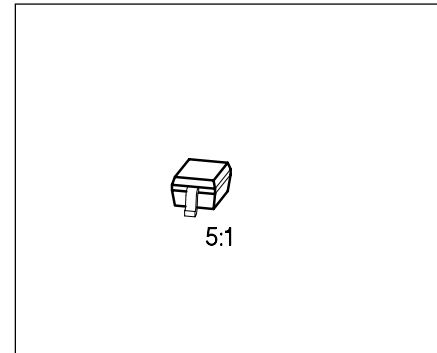


Silicon Variable Capacitance Diode

BB 831

Preliminary Data

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



Type	Ordering Code (tape and reel)	Pin Configuration			Marking	Package
		1		2		
BB 831	Q62702-B592	C		A	white T	SOD-323

Maximum Ratings

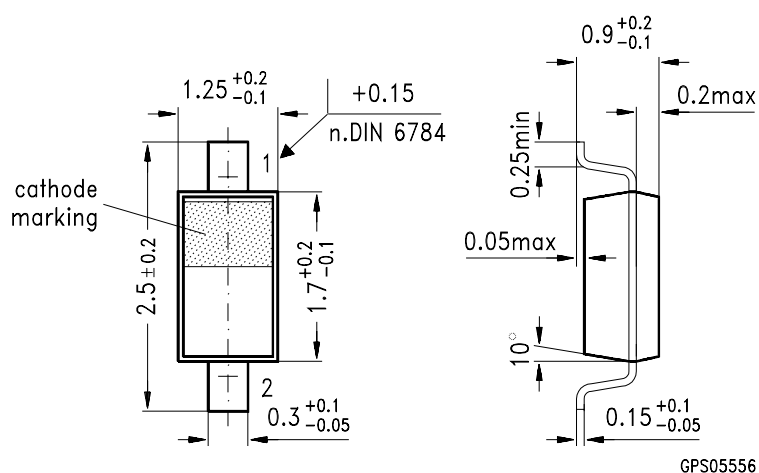
Parameter	Symbol	Values	Unit
Reverse voltage	V_R	30	V
Reverse voltage ($R \geq 5 \text{ k}\Omega$)	V_{RM}	35	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	– 55 ... + 150	°C
Storage temperature range	T_{stg}	– 55 ... + 150	°C

Thermal Resistance

Junction-ambient	$R_{th JA}$	≤ 450	K/W
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Electrical Characteristicsat $T_A = 25\text{ °C}$, unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
Reverse current $V_R = 30\text{ V}$ $V_R = 30\text{ V}, T_A = 85\text{ °C}$	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	8.9 1.06	9.8 1.2	pF
Capacitance ratio $f = 1\text{ MHz}$, $V_R = 1\text{ V}, 28\text{ V}$	C_{T1}/C_{T28}	7.8	8.4	9.5	—
Capacitance matching $V_R = 1\text{ V} \dots 28\text{ V}, f = 1\text{ MHz}$	$\Delta C_T/C_T$	—	—	3	%
Series resistance $C_T = 9\text{ pF}, f = 470\text{ MHz}$	r_s	—	1	—	Ω
Series inductance	L_s	—	2	—	nH

Package Outline**SOD-323**

Diode capacitance $C_T = f(V_R)$

$f = 1 \text{ MHz}$

