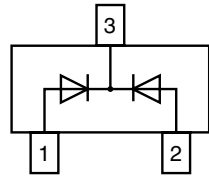
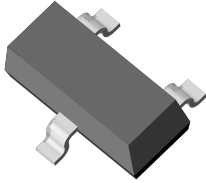


## Dual Varicap Diode



18108

### MECHANICAL DATA

**Case:** SOT23 plastic case

**Weight:** approx. 8.1 mg

**Packaging codes/options:**

GS18/10K per 13" reel (8 mm tape), 10K/box

GS08/3K per 7" reel (8 mm tape), 15K/box

### FEATURES

- Silicon epitaxial planar diode
- Common cathode
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC


**RoHS**  
COMPLIANT

### APPLICATIONS

- Tuning of separate resonant circuits
- Push-pull circuits in FM range
- Especially for car radios

### PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	REMARKS
BB814-1	$V_{RRM} = 20\text{ V}$ , $C_D = 43\text{ pF}$ to $45.5\text{ pF}$	BB814-1-GS18 or BB814-1-GS08	SH1	Tape and reel
BB814-2	$V_{RRM} = 20\text{ V}$ , $C_D = 44.5\text{ pF}$ to $46.5\text{ pF}$	BB814-2-GS18 or BB814-2-GS08	SH2	Tape and reel

### ABSOLUTE MAXIMUM RATINGS <sup>(1)</sup>

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		$V_{RRM}$	20	V
Reverse voltage		$V_R$	18	V
Forward current		$I_F$	50	mA

**Note**
<sup>(1)</sup>  $T_{amb} = 25\text{ °C}$ , unless otherwise specified

### THERMAL CHARACTERISTICS <sup>(1)</sup>

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Junction temperature		$T_j$	125	°C
Storage temperature range		$T_{stg}$	- 55 to + 150	°C

**Note**
<sup>(1)</sup>  $T_{amb} = 25\text{ °C}$ , unless otherwise specified

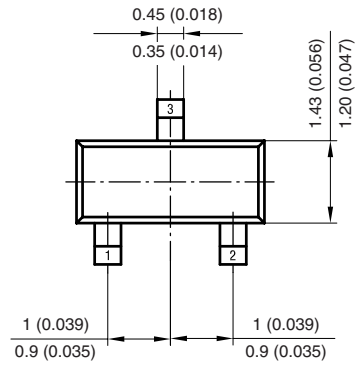
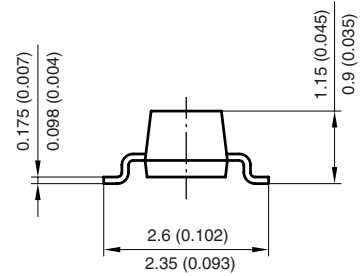
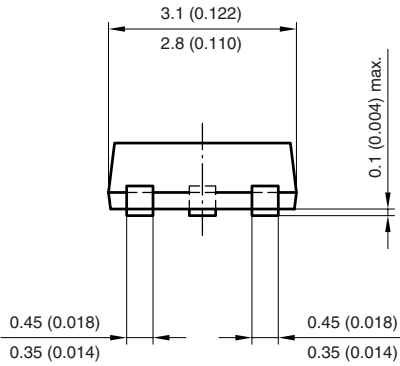
### ELECTRICAL CHARACTERISTICS <sup>(1)</sup>

PARAMETER	TEST CONDITIONS	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse current	$V_R = 16\text{ V}$		$I_R$			20	nA
	$V_R = 16\text{ V}$ , $T_j = 60\text{ °C}$		$I_R$			200	nA
Diode capacitance <sup>(2)</sup>	$V_R = 2\text{ V}$	BB814-1	$C_D$	43		45.5	pF
		BB814-2	$C_D$	44.5		46.5	pF
	$V_R = 8\text{ V}$	BB814-1	$C_D$	19.1		21.95	pF
		BB814-2	$C_D$	19.75		22.70	pF
Capacitance ratio	$V_R = 2\text{ V}$ , $8\text{ V}$ , $f = 1\text{ MHz}$		$C_{D2}/C_{D8}$	2.05		2.25	
Series resistance	$C_D = 38\text{ pF}$ , $f = 100\text{ MHz}$		$R_s$			0.5	$\Omega$

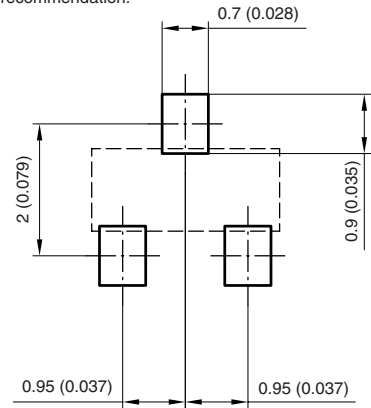
**Notes**
<sup>(1)</sup>  $T_{amb} = 25\text{ °C}$ , unless otherwise specified

<sup>(2)</sup> In the reverse voltage range of  $V_R = (2\text{ V to } 8\text{ V})$  for diodes 4 taped in sequence the max. deviation is 3 %

**PACKAGE DIMENSIONS** in millimeters (inches): **SOT23**



Foot print recommendation:



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17418



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