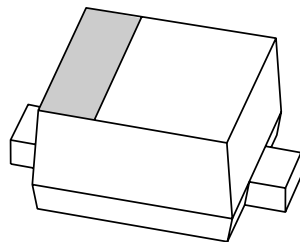


DATA SHEET



BA892 Band-switching diode

Preliminary specification
File under Discrete Semiconductors, SC01

1998 May 08

Band-switching diode

BA892

FEATURES

- Small plastic SMD package
- Low diode capacitance
- Low diode forward resistance
- Small inductance.

APPLICATIONS

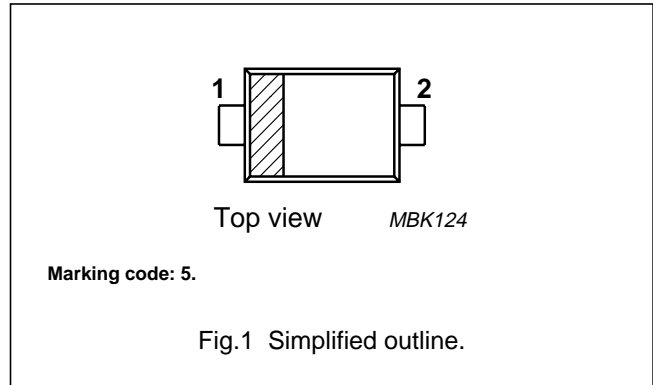
- Low loss band-switching in VHF television tuners
- Surface mount band-switching circuits.

DESCRIPTION

Planar, high performance band-switch diode in a small SMD plastic package (SOD523).

PINNING SOD523

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | cathode |
| 2 | anode |



LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

| SYMBOL | PARAMETER | CONDITIONS. | MIN. | MAX. | UNIT |
|-----------|----------------------------|----------------------------------|------|------|------------------|
| V_R | continuous reverse voltage | | – | 35 | V |
| I_F | continuous forward current | | – | 100 | mA |
| P_{tot} | total power dissipation | $T_S = 90\text{ }^\circ\text{C}$ | – | 715 | mW |
| T_{stg} | storage temperature | | –65 | +150 | $^\circ\text{C}$ |
| T_j | junction temperature | | –65 | +150 | $^\circ\text{C}$ |

Band-switching diode

BA892

ELECTRICAL CHARACTERISTICS

$T_j = 25\text{ }^\circ\text{C}$ unless otherwise specified.

| SYMBOL | PARAMETER | CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|--------|--------------------------|--|------|------|------|----------|
| V_F | forward voltage | $I_F = 10\text{ mA}$ | – | – | 1 | V |
| I_R | reverse current | $V_R = 30\text{ V}$ | – | – | 20 | nA |
| C_d | diode capacitance | $V_R = 1\text{ V}; f = 1\text{ MHz}; \text{note } 1$ | – | 0.92 | 1.4 | pF |
| | | $V_R = 3\text{ V}; f = 1\text{ MHz}; \text{note } 1$ | 0.6 | 0.85 | 1.1 | pF |
| r_D | diode forward resistance | $I_F = 3\text{ mA}; f = 100\text{ MHz}; \text{note } 1$ | – | 0.45 | 0.7 | Ω |
| | | $I_F = 10\text{ mA}; f = 100\text{ MHz}; \text{note } 1$ | – | 0.36 | 0.5 | Ω |
| L_S | series inductance | | – | 0.6 | – | nH |

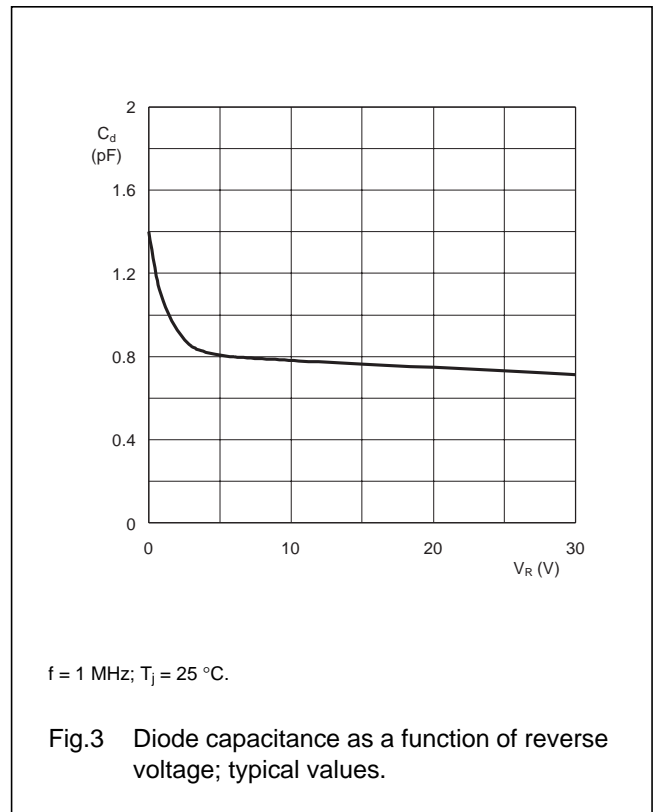
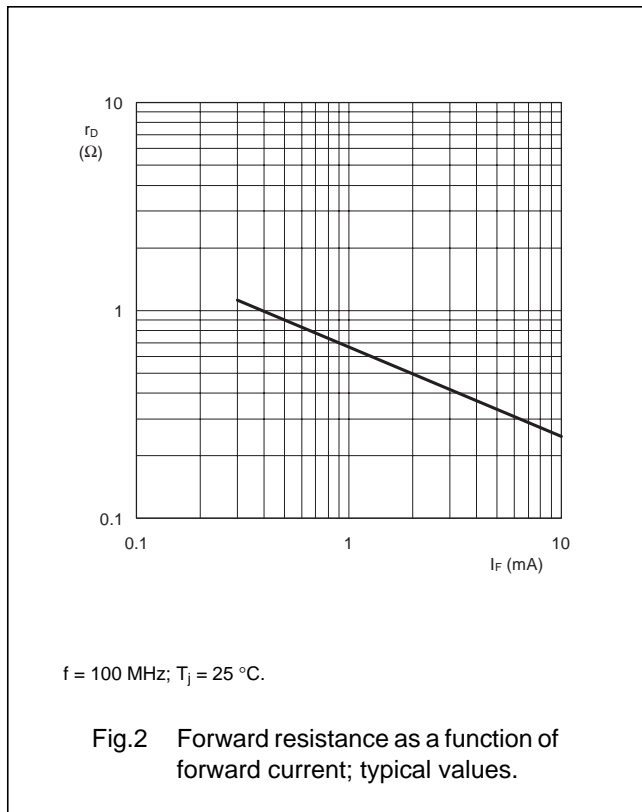
Note

1. Guaranteed on AQL basis: inspection level S4, AQL 1.0.

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | CONDITIONS | VALUE | UNIT |
|---------------|---|------------|-------|------|
| $R_{th\ j-s}$ | thermal resistance from junction to soldering point | | 85 | K/W |

GRAPHICAL DATA



Band-switching diode

BA892

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD523

DIMENSIONS (mm are the original dimensions)

| UNIT | A | bp | c | D | E | HE | v |
|------|------------|--------------|------------|------------|------------|------------|------|
| mm | 0.7 0.5 | 0.35 0.25 | 0.2 0.1 | 1.3 1.1 | 0.9 0.7 | 1.7 1.5 | 0.15 |

Note
1. The marking band indicates the cathode.

| OUTLINE VERSION | REFERENCES | | | | EUROPEAN PROJECTION | ISSUE DATE |
|-----------------|------------|-------|-------|--|---------------------|------------|
| | IEC | JEDEC | EIAJ | | | |
| SOD523 | | | SC-79 | | | 98-04-28 |

DEFINITIONS

| Data sheet status | |
|---|---|
| Objective specification | This data sheet contains target or goal specifications for product development. |
| Preliminary specification | This data sheet contains preliminary data; supplementary data may be published later. |
| Product specification | This data sheet contains final product specifications. |
| Limiting values | |
| Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability. | |
| Application information | |
| Where application information is given, it is advisory and does not form part of the specification. | |

LIFE SUPPORT APPLICATIONS

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Band-switching diode

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NOTES

Band-switching diode

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NOTES

Band-switching diode

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NOTES

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