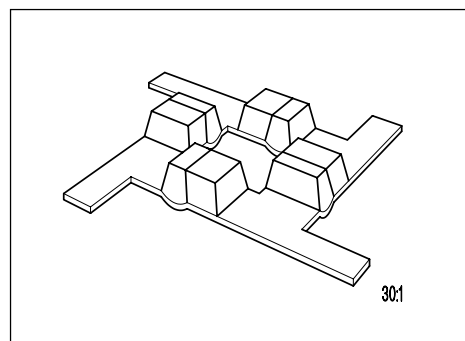


## Silicon Schottky Diodes

## BAT 15- ... R

- Beam lead technology
- Low dimension
- High performance
- Low barrier



**ESD:** Electrostatic discharge sensitive device, observe handling precautions!

| Type         | Marking | Ordering Code | Pin Configuration | Package <sup>1)</sup> |
|--------------|---------|---------------|-------------------|-----------------------|
| BAT 15-020 R | -       | Q62702-D1264  |                   | R                     |
| BAT 15-050 R |         | Q62702-D1272  |                   |                       |
| BAT 15-090 R |         | Q62702-D1281  |                   |                       |
| BAT 15-110 R |         | Q62702-D1290  |                   |                       |

### Maximum Ratings

| Parameter                   | Symbol    | Values                       |                              | Unit |
|-----------------------------|-----------|------------------------------|------------------------------|------|
|                             |           | BAT 15-020 R<br>BAT 15-050 R | BAT 15-090 R<br>BAT 15-110 R |      |
| Forward current             | $I_F$     | 100                          | 50                           | mA   |
| Junction temperature        | $T_j$     | 175                          |                              | °C   |
| Storage temperature range   | $T_{stg}$ | - 65 ... + 150               |                              |      |
| Operating temperature range | $T_{op}$  | - 65 ... + 150               |                              |      |

1) For detailed information see chapter Package Outlines.

## Electrical Characteristics

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

| Parameter | Symbol | Values |      |      | Unit |
|-----------|--------|--------|------|------|------|
|           |        | min.   | typ. | max. |      |

## DC Characteristics

|   |  |        |                  |                              |                              |    |                  |          |
|---|--|--------|------------------|------------------------------|------------------------------|----|------------------|----------|
| Diode capacitance<br>$V_R = 0, f = 1\text{ MHz}$  | BAT 15-020 R<br>BAT 15-050 R<br>BAT 15-090 R<br>BAT 15-110 R | $C_T$  | –<br>–<br>–<br>– | 0.30<br>0.20<br>0.14<br>0.10 | 0.35<br>0.25<br>0.15<br>0.12 | pF |                  |          |
| Forward voltage<br>$I_F = 1\text{ mA}$  | BAT 15-020 R<br>BAT 15-050 R<br>BAT 15-090 R<br>BAT 15-110 R | $V_F$  | –<br>–<br>–<br>– | 0.26<br>0.28<br>0.30<br>0.31 | –<br>–<br>–<br>–             | V  |                  |          |
| $I_F = 10\text{ mA}$  | BAT 15-020 R<br>BAT 15-050 R<br>BAT 15-090 R<br>BAT 15-110 R |        | –<br>–<br>–<br>– | 0.35<br>0.39<br>0.44<br>0.45 | –<br>–<br>–<br>–             |    |                  |          |
| Single sideband noise figure<br>$F_{IF} = 1.5\text{ dB}, P_{LO} = 0\text{ dBm}, f_{IF} = 10.7\text{ MHz}$ | BAT 15-020 R<br>BAT 15-050 R<br>BAT 15-090 R<br>BAT 15-110 R |        | $F_{SSB}$        | –<br>–<br>–<br>–             | 6.0<br>6.5<br>6.5<br>7.0     |    | –<br>–<br>–<br>– | dB       |
| $f = 3.0\text{ GHz}$  | BAT 15-020 R   |        |                  | –                            | 6.0                          |    | –                |          |
| $f = 6.0\text{ GHz}$  | BAT 15-050 R   |        |                  | –                            | 6.5                          |    | –                |          |
| $f = 9.3\text{ GHz}$  | BAT 15-090 R   |        |                  | –                            | 6.5                          |    | –                |          |
| $f = 16\text{ GHz}$   | BAT 15-110 R   |        | –                | 7.0                          | –                            |    |                  |          |
| Differential forward resistance<br>$I_F = 10\text{ mA}$   | BAT 15-020 R<br>BAT 15-050 R                                 |        | $r_f$            | –<br>–                       | 3.5<br>4.0                   |    | –<br>–           | $\Omega$ |
| $I_F = 50\text{ mA}$  | BAT 15-090 R<br>BAT 15-110 R                                 | –<br>– |                  | 7.0<br>10.0                  | –<br>–                       |    |                  |          |



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