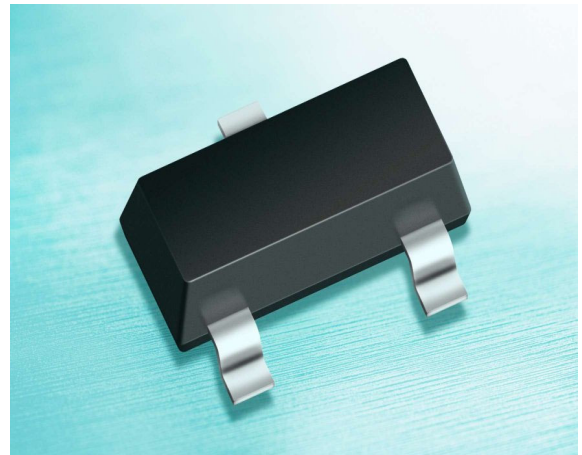
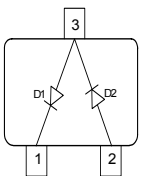


Silicon RF Schottky Diodes

- Low barrier type for mixer applications up to 12 GHz, phase detectors and modulators
- Pb-free (RoHS compliant) package


BAT15-04R


ESD (Electrostatic discharge) sensitive device, observe handling precaution!

| Type | Package | Configuration | L_S (nH) | Marking |
|------------|---------|---------------------|------------|---------|
| BAT15-04R* | SOT 23 | reverse series pair | 1.5 | 4R |

*preliminary

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

| Parameter | Symbol | Value | Unit |
|-----------------------------|-----------|-------------|------|
| Diode reverse voltage | V_R | 4 | V |
| Forward current | I_F | 110 | mA |
| Junction temperature | T_j | 150 | °C |
| Operating temperature range | T_{op} | -55 ... 150 | |
| Storage temperature | T_{stg} | -65 ... 150 | |

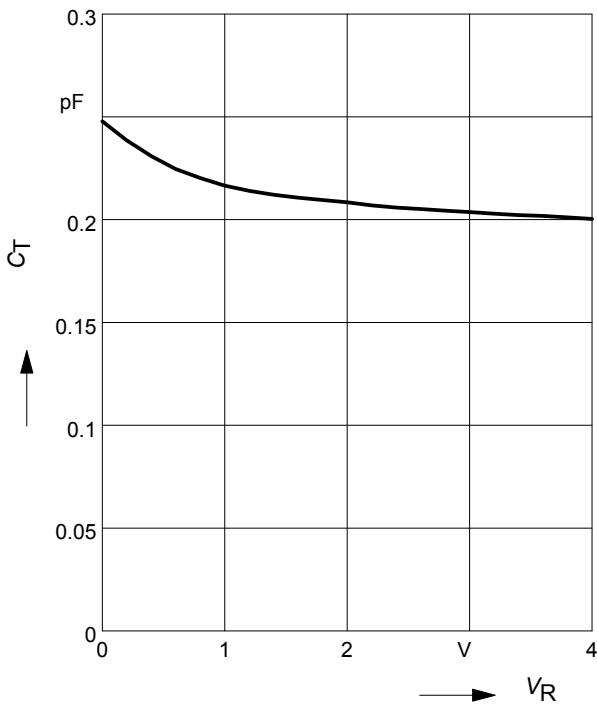
Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

| Parameter | Symbol | Values | | | Unit |
|--|--------------|--------|------|------|----------|
| | | min. | typ. | max. | |
| DC Characteristics | | | | | |
| Breakdown voltage $I_{(BR)} = 10 \mu\text{A}$ | $V_{(BR)}$ | 4 | - | - | V |
| Forward voltage $I_F = 1 \text{ mA}$ | V_F | 0.2 | 0.25 | 0.3 | |
| Forward voltage matching ¹⁾ $I_F = 1 \text{ mA}$ | ΔV_F | - | - | 10 | mV |
| AC Characteristics | | | | | |
| Diode capacitance $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ | C_T | - | 0.25 | - | pF |
| Differential forward resistance $I_F = 5 \text{ mA}$ | R_F | - | - | 18 | Ω |

¹⁾ ΔV_F is the difference between lowest and highest V_F in a multiple diode component.

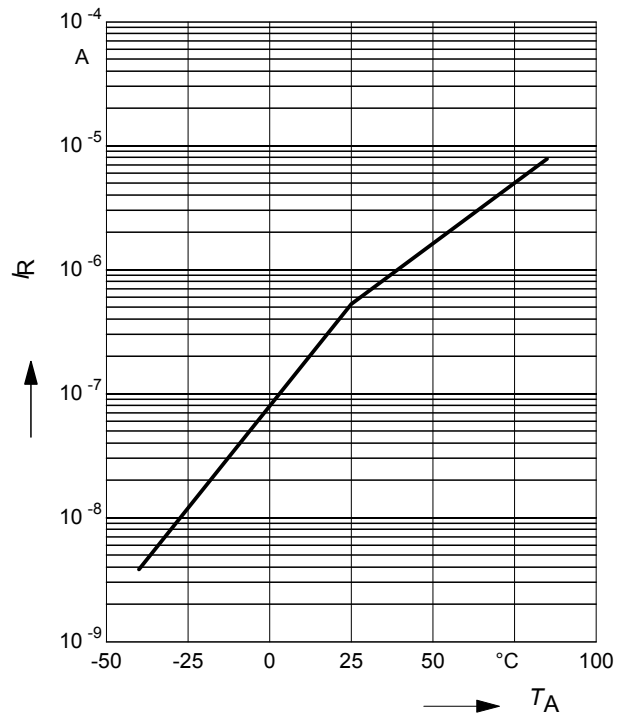
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



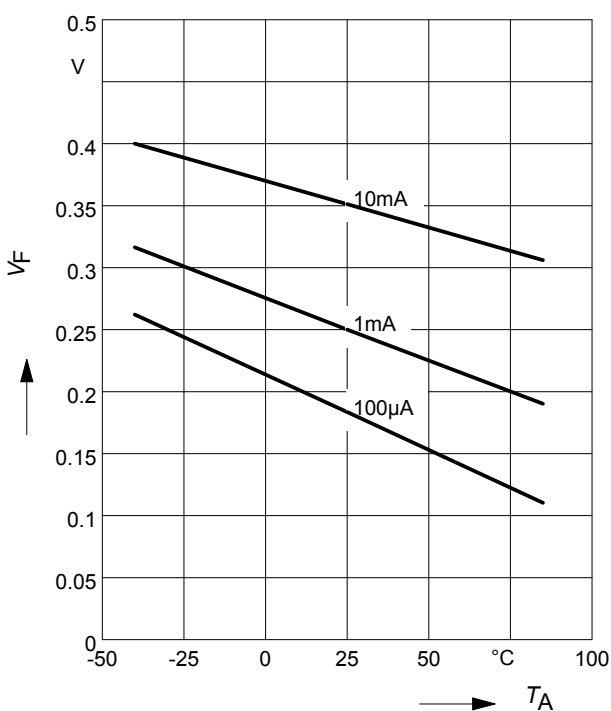
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



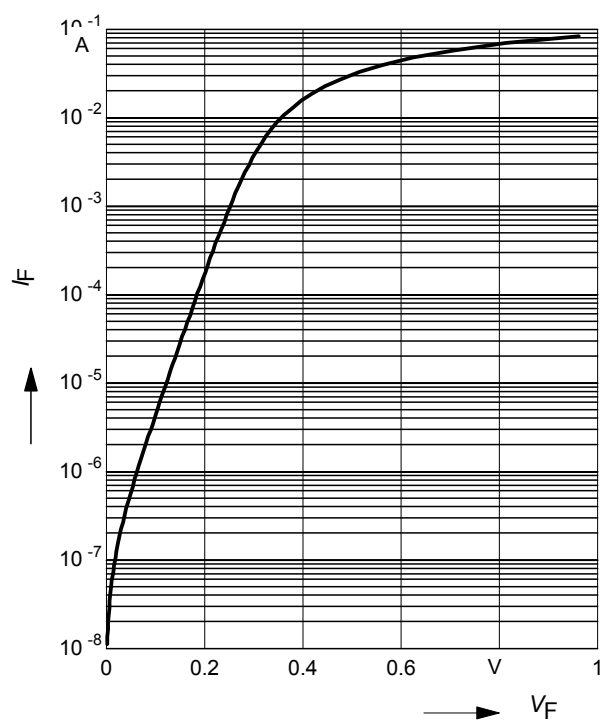
Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$

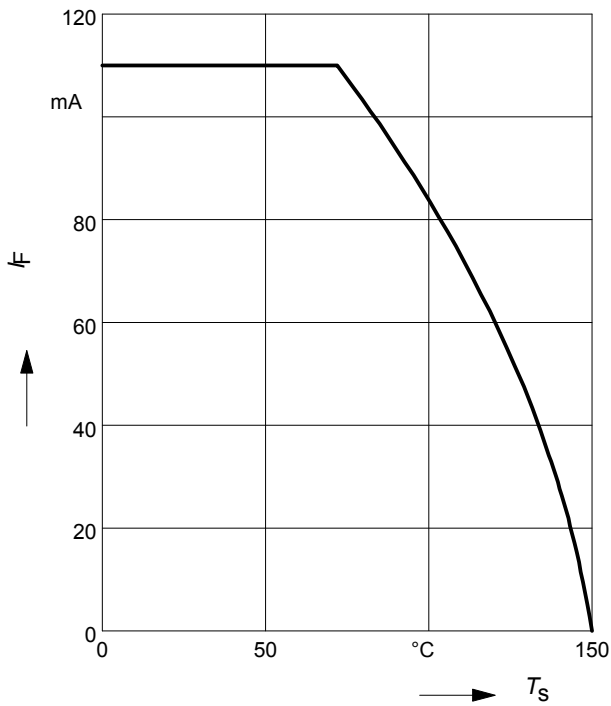


Forward current $I_F = f(V_F)$

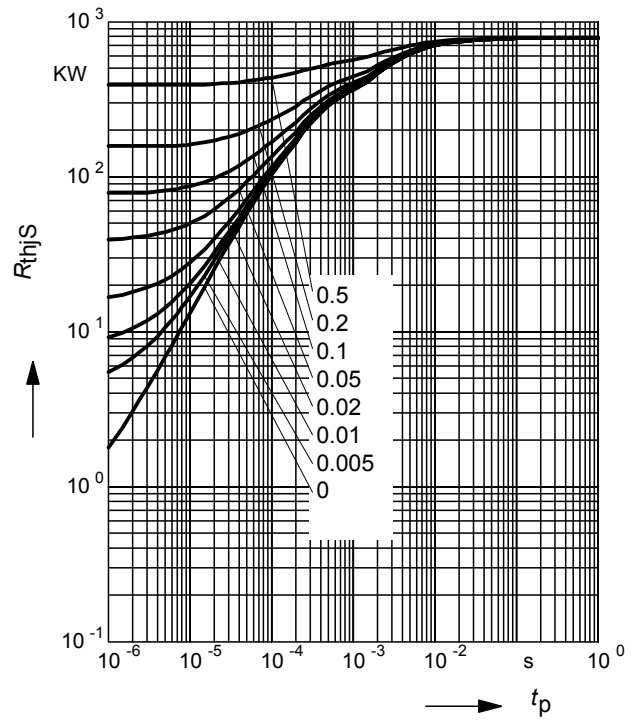
$T_A = 25^\circ\text{C}$



Forward current $I_F = f(T_S)$

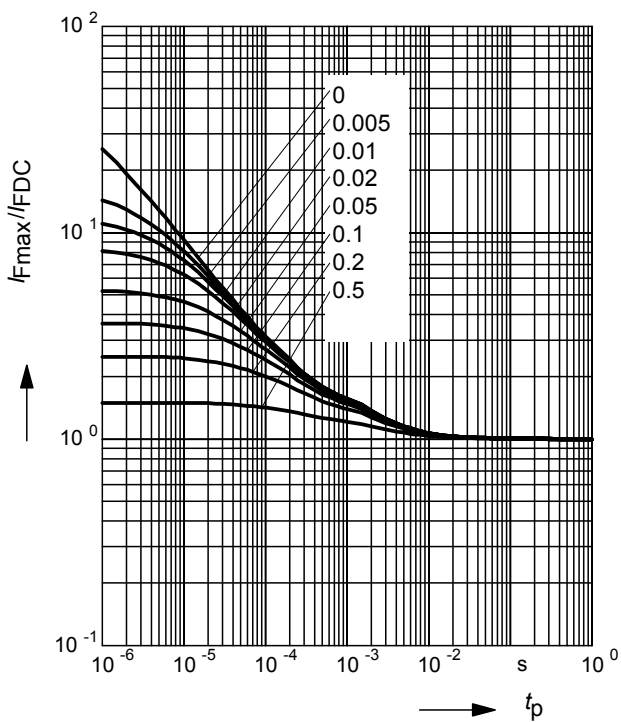


Permissible Puls Load $R_{thJS} = f(t_p)$



Permissible Pulse Load

$I_{Fmax} / I_{FDC} = f(t_p)$



Package Outline



1) Lead width can be 0.6 max. in dambar area

Foot Print



Marking Layout (Example)



Standard Packing

Reel \varnothing 180 mm = 3.000 Pieces/Reel
 Reel \varnothing 330 mm = 10.000 Pieces/Reel



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