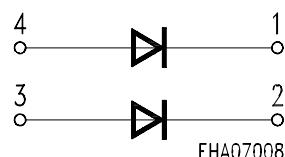
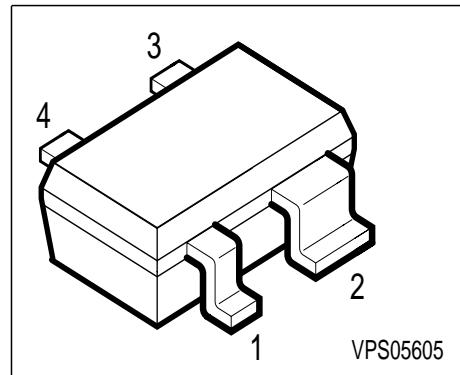


Silicon Schottky Diode

- Low barrier diode for detectors up to GHz frequencies



ESD: Electrostatic discharge sensitive device, observe handling precaution

| Type | Marking | Ordering Code | Pin Configuration | | | | Package |
|------------|---------|---------------|-------------------|------|------|------|---------|
| BAT 62-07W | 62s | Q62702-A1198 | 1=C1 | 2=C2 | 3=A2 | 4=A1 | SOT-343 |

Maximum Ratings

| Parameter | Symbol | Value | Unit |
|---|-----------|--------------|------------------|
| Diode reverse voltage | V_R | 40 | V |
| Forward current | I_F | 20 | mA |
| Total power dissipation, $T_S = 103 \text{ }^\circ\text{C}$ | P_{tot} | 100 | mW |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 ... +150 | |

Thermal Resistance

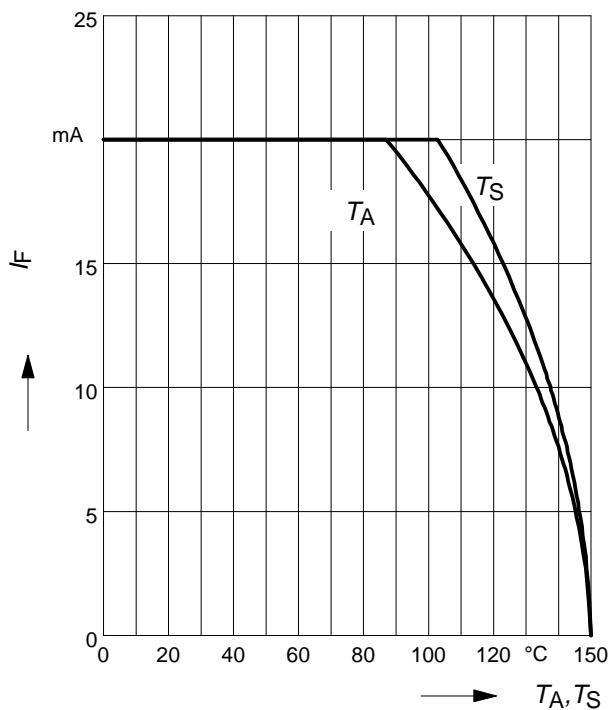
| | | | |
|----------------------------|------------|------------|-----|
| Junction - ambient 1) | R_{thJA} | ≤ 630 | K/W |
| Junction - soldering point | R_{thJS} | ≤ 470 | |

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

| Parameter | Symbol | Values | | | Unit |
|---|---------------|---------------|-------------|-------------|------------------|
| | | min. | typ. | max. | |
| DC characteristics | | | | | |
| Reverse current $V_R = 40 \text{ V}$ | I_R | - | - | 10 | μA |
| Forward voltage $I_F = 2 \text{ mA}$ | V_F | - | 0.58 | 1 | V |
| AC characteristics | | | | | |
| Diode capacitance $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ | C_T | - | 0.35 | 0.6 | pF |
| Case capacitance $f = 1 \text{ MHz}$ | C_C | - | 0.1 | - | |
| Differential resistance $V_R = 0, f = 10 \text{ kHz}$ | R_0 | - | 225 | - | $\text{k}\Omega$ |
| Series inductance chip to ground | L_s | - | 2 | - | nH |

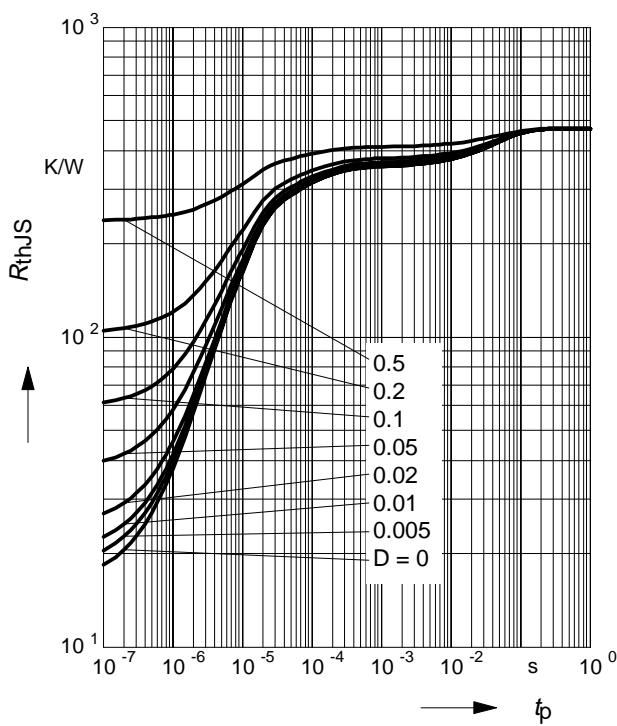
Forward current $I_F = f(T_A^*; T_S)$

* mounted on alumina



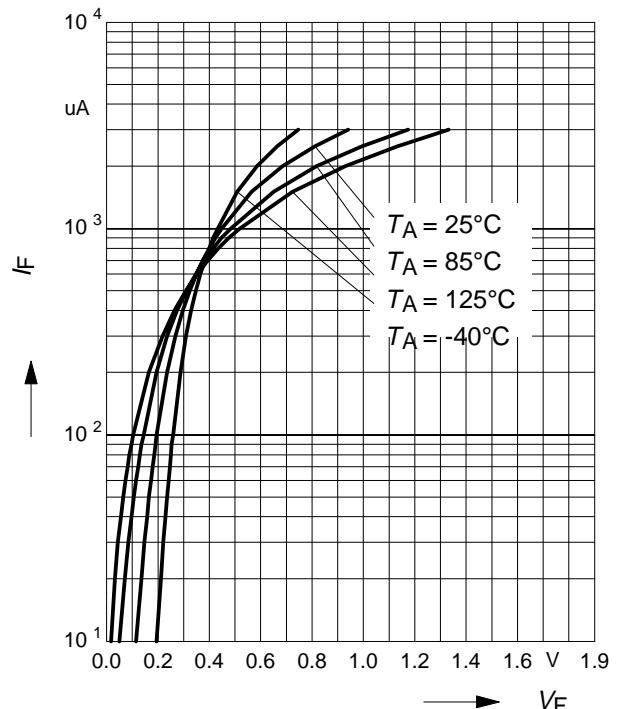
Permissible Pulse Load

$I_{F\max} / I_{FDC} = f(t_p)$

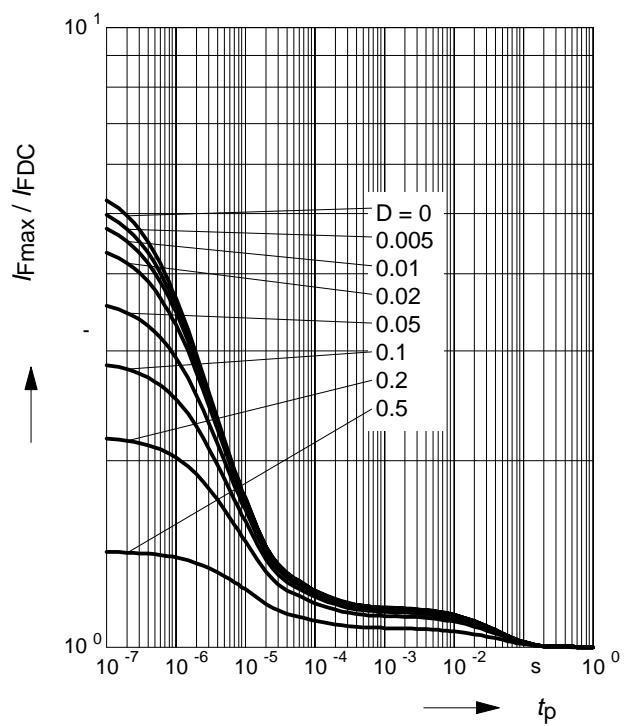


Forward current $I_F = f(V_F)$

T_A = parameter

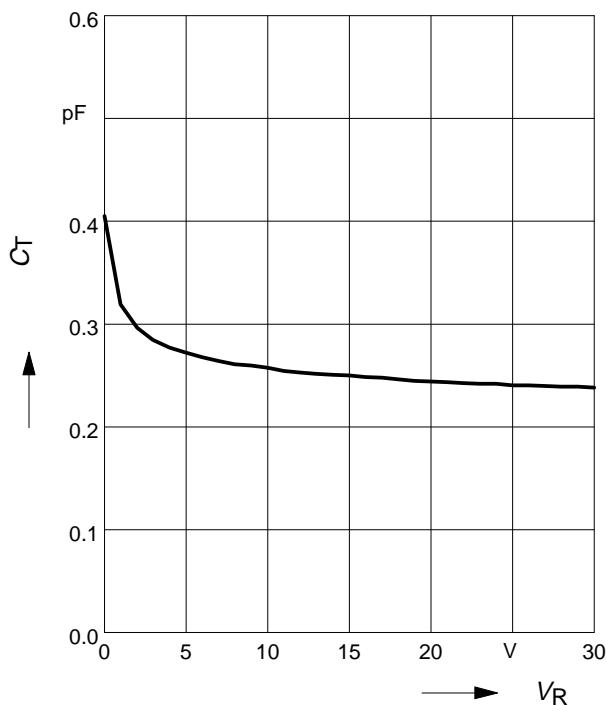


Permissible pulse load $I_{F\max} / I_{FDC} = f(t_p)$



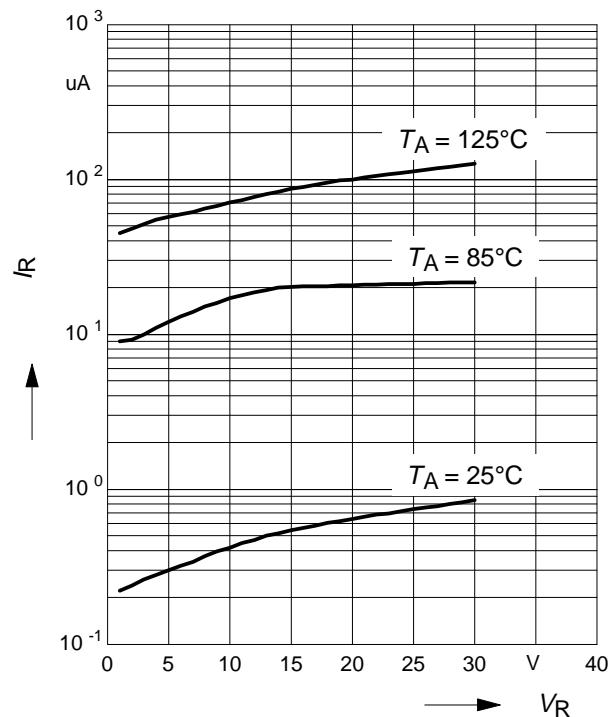
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



Reverse current $I_R = f(V_R)$

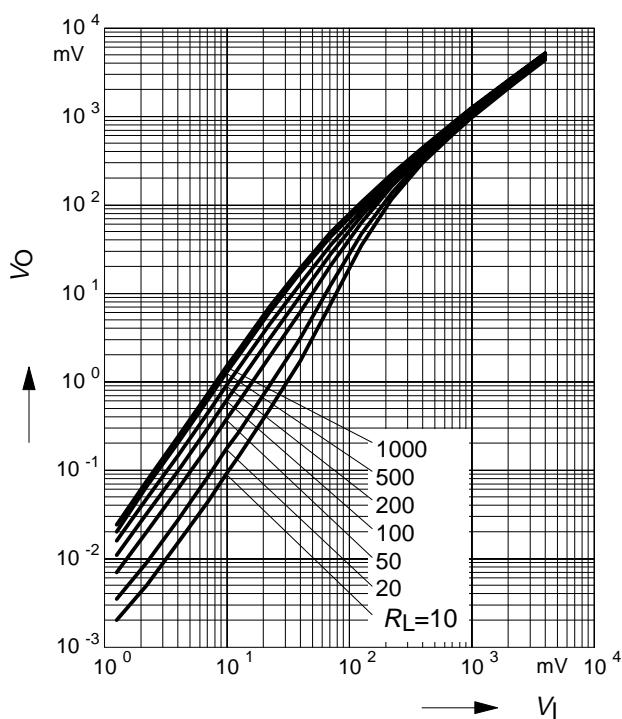
$T_A = \text{Parameter}$



Rectifier voltage $V_{\text{out}} = f(V_{\text{in}})$

$f = 900\text{ MHz}$

$R_L = \text{parameter in k}\Omega$



Testcircuit

