# SIEMENS
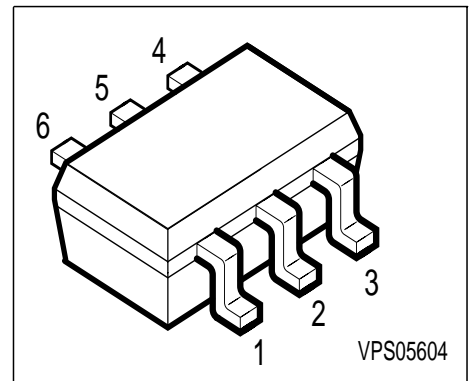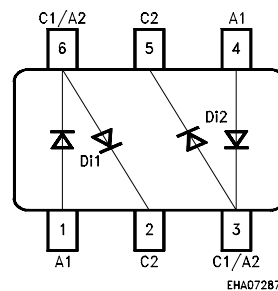
## Silicon Schottky Diode Array

- General-purpose diode for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing



**ESD**: **E**lectro**s**tatic **d**ischarge sensitive device, observe handling precautions!

| Type | Marking | Ordering Code | Pin Configuration | | | Package |
|---|---|---|---|---|---|---|
| BAS 70-04S | 74s | Q62702-A3468 | 1/4=A1 | 2/5=C2 | 3/6=C1/A2 | SOT-363 |

## Maximum Ratings

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Diode reverse voltage | $V_R$ | 70 | V |
| Forward current | $I_F$ | 70 | mA |
| Surge forward current (t< 100µs) | $I_{FSM}$ | 100 | |
| Total power dissipation, $T_S \leq 97°C$ | $P_{tot}$ | 250 | mW |
| Junction temperature | $T_j$ | 150 | °C |
| Operating temperature range | $T_{op}$ | -55...+150 | |
| Storage temperature | $T_{stg}$ | -55...+150 | |

## Thermal Resistance

| | Symbol | Value | Unit |
|---|---|---|---|
| Junction - ambient [1] | $R_{thJA}$ | $\leq 445$ | K/W |
| Junction - soldering point | $R_{thJS}$ | $\leq 210$ | |

1) Package mounted on epoxy pcb 40mm x 40mm x 1.5mm / 0.5cm$^2$ Cu

**Electrical Characteristics** at $T_A = 25°C$, unless otherwise specified

| Parameter | Symbol | Values | | | Unit |
|---|---|---|---|---|---|
| | | min. | typ. | max. | |
| **DC characteristics** | | | | | |
| Breakdown voltage $I_{(BR)} = 10\ \mu A$ | $V_{(BR)}$ | 70 | - | - | V |
| Reverse current $V_R = 50\ V$ $V_R = 70\ V$ | $I_R$ | - - | - - | 0.1 10 | µA |
| Forward voltage $I_F = 1\ mA$ $I_F = 10\ mA$ $I_F = 15\ mA$ | $V_F$ | 300 600 750 | 375 705 880 | 410 750 1000 | mV |
| **AC characteristics** | | | | | |
| Diode capacitance $V_R = 0\ V, f = 1\ MHz$ | $C_T$ | - | 1.6 | 2 | pF |
| Charge carrier life time $I_F = 25\ mA$ | $\tau$ | - | - | 100 | ps |
| Forward resistance $I_F = 10\ mA, f = 10\ kHz$ | $r_f$ | - | 30 | - | $\Omega$ |

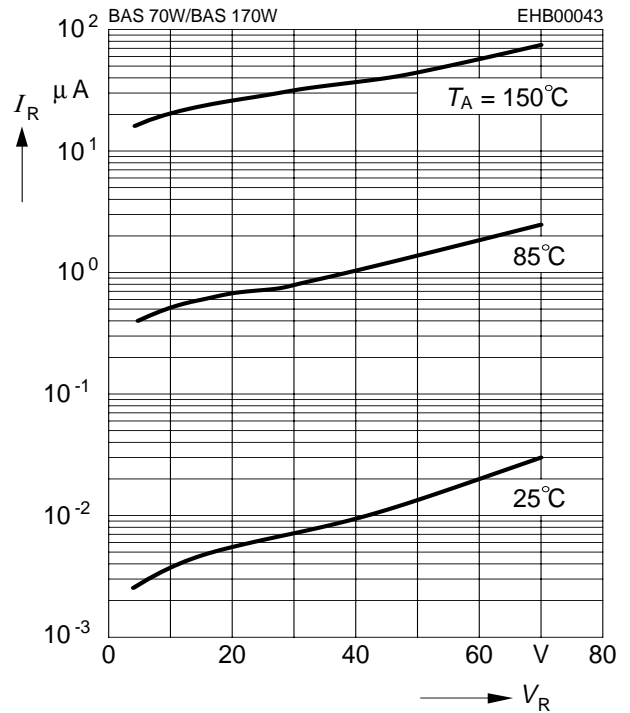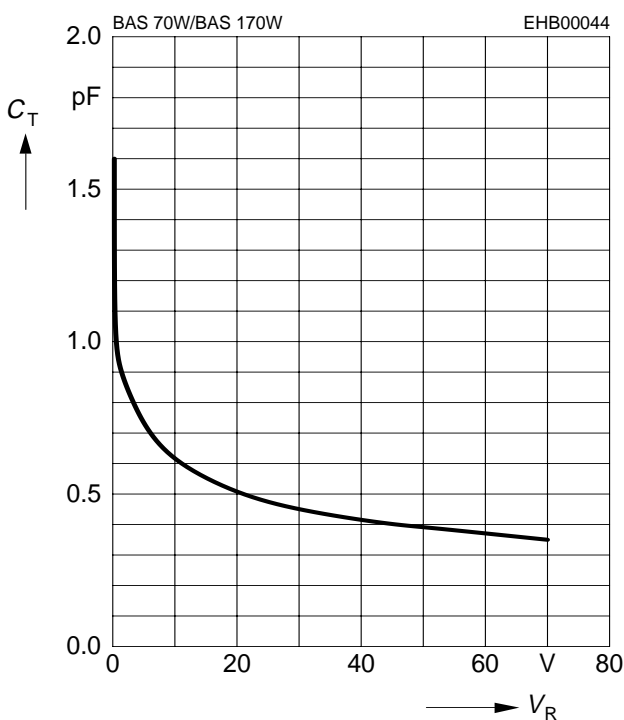**Forward current** $I_F = f(V_F)$

$T_A$ = Parameter
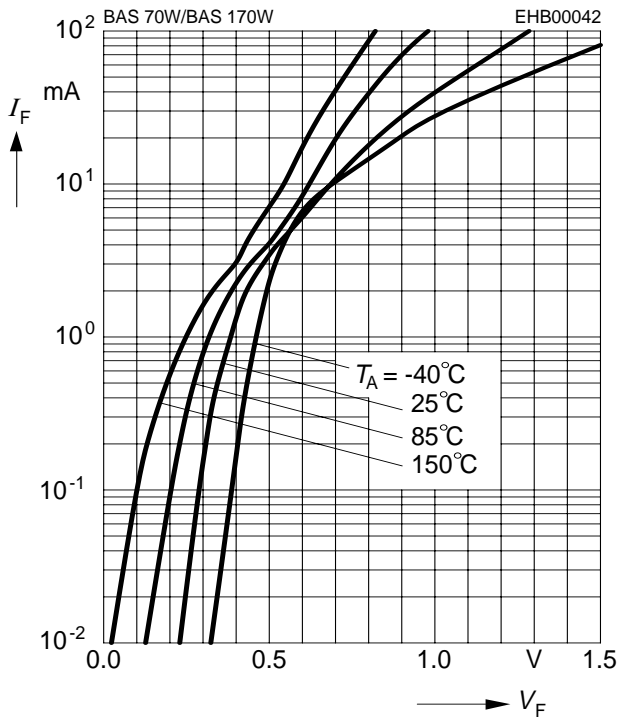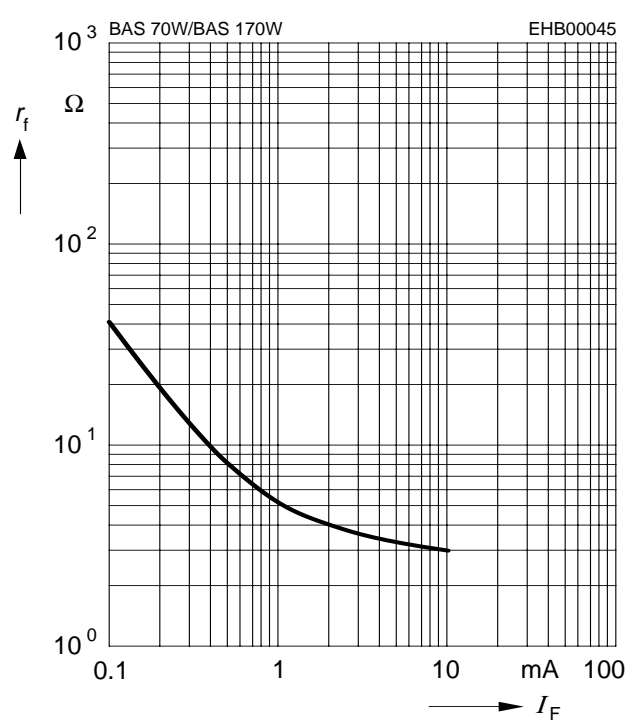


**Reverse current** $I_R = f(V_R)$

$T_A$ = Parameter



**Diode capacitance** $C_T = f(V_R)$

$f$ = 1MHz



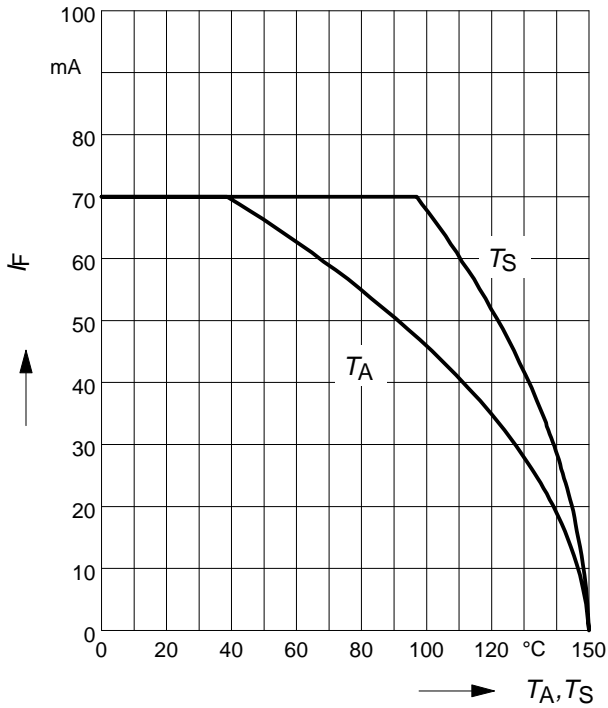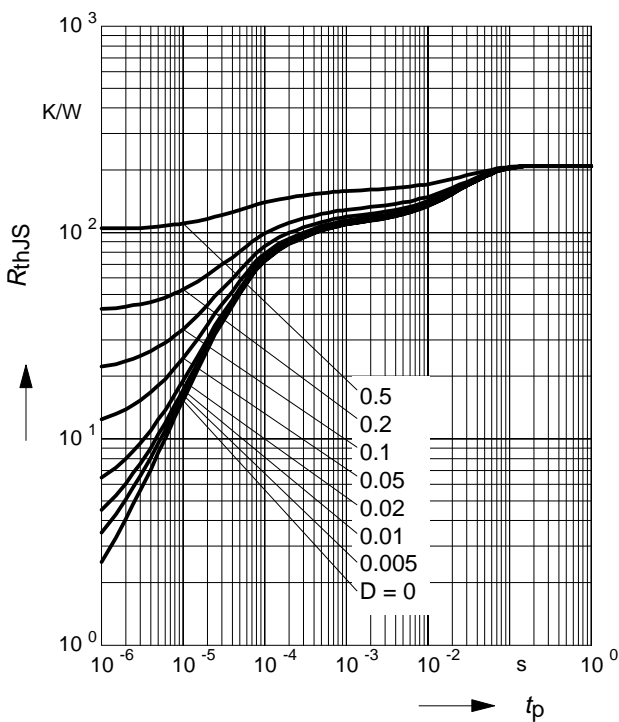**Differential forward resistance** $r_f = f(I_F)$

$f$ = 10 kHz

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

\* Package mounted on epoxy



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



**Permissible Pulse Load**

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