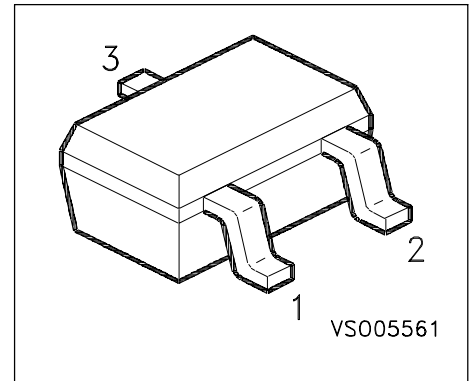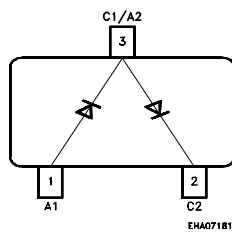## Silicon Schottky Diodes

Preliminary data
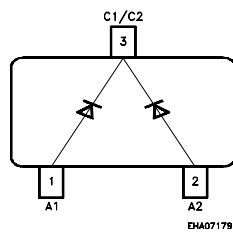
• For mixer applications in the VHF/UHF range

• For high speed switching

VS005561

BAT 68-04W   BAT68-05W   BAT68-06W

Type	Marking	Ordering Code	Pin Configuration			Package
BAT 68-04W	84s	Q62702-	1 = A1	2 = K2	3 = K1/A2	SOT-323
BAT 68-05W	85s	Q62702-	1 = A1	2 = A2	3 = K1/K2	SOT-323
BAT 68-06W	86s	Q62702-	1 = K1	2 = K2	3 = A1/A2	SOT-323
BAT 68W	83s	Q62702-	1 = A	n.c.	3 = K	SOT-323

Maximum Ratings

Parameter	Symbol	Values	Unit
Diode reverse voltage	V_R	8	V
Forward current	I_F	130	mA
Total power dissipation, BAT68W T_S=97°C	P_{tot}	150	mW
Total power dissipation, BAW68-04...06W T_S=92°C	P_{tot}	150	
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	- 65 ... + 150	
Storage temperature	T_{stg}	- 65 ... + 150	

Thermal Resistance

Junction - ambient, BAT68W	R_{thJA}	≤ 435	K/W
Junction - ambient, BAT68-04W...06W	R_{thJA}	≤ 550	
Junctui - soldering point, BAT68W	R_{thJS}	≤ 355	
Junction - soldering point, BAT68-04W...06W	R_{thJS}	390	

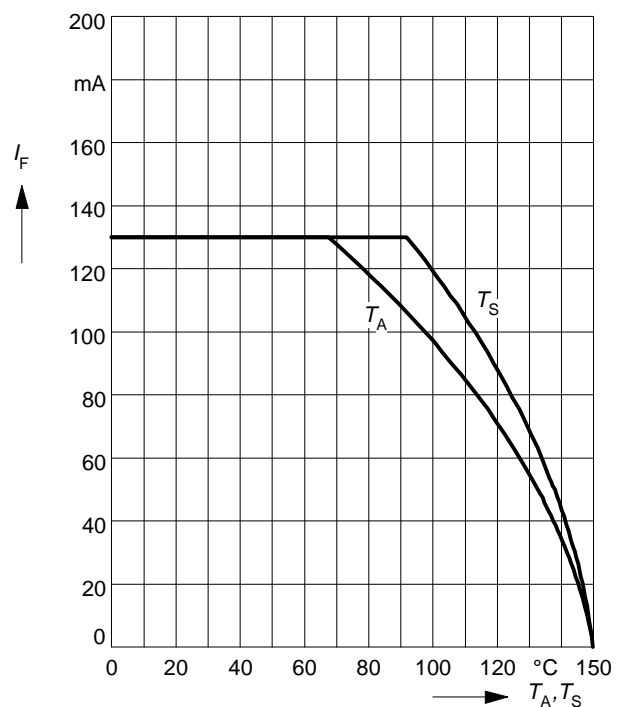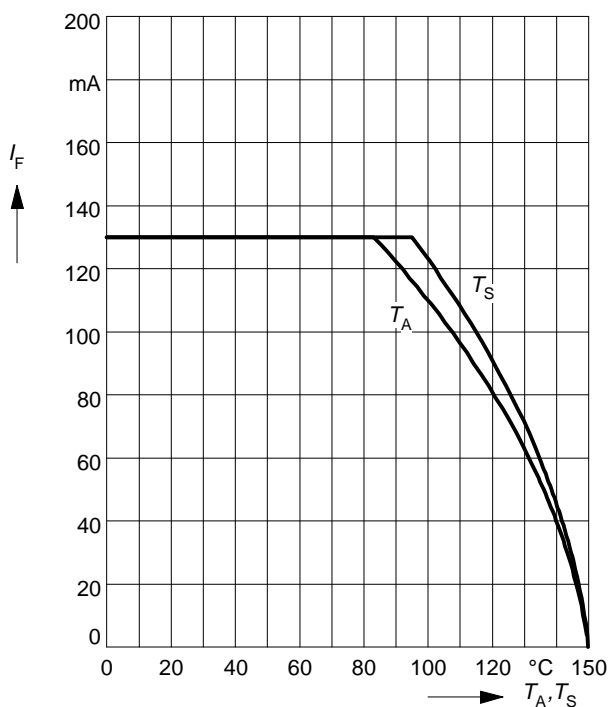**Electrical Characteristics** at T_A=25°C, unless otherwise specified

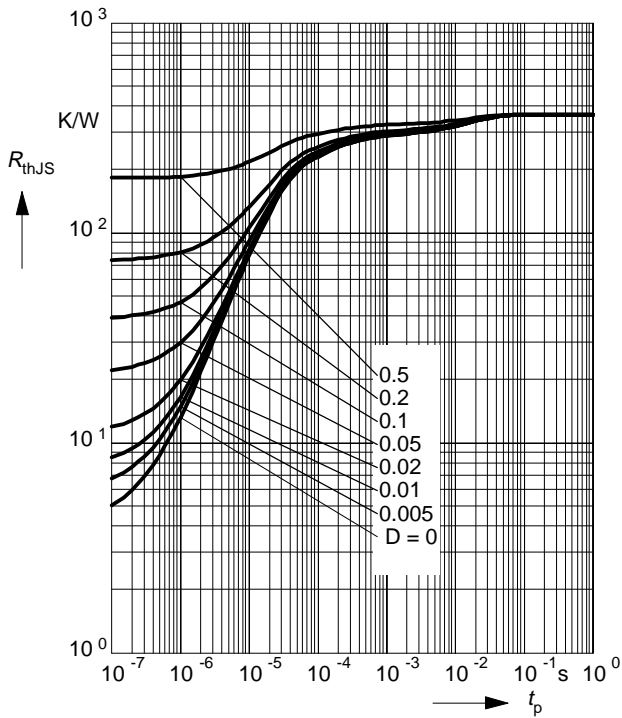| Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Breakdown voltage	$V_{(BR)}$				V
$I_{(BR)}$ = 100 µA		8	-	-	
Reverse current	I_R				µA
V_R = 1 V, T_A = 25 °C		-	-	0.1	
V_R = 1 V, T_A = 60 °C		-	-	1.2	
Forward voltage	V_F				mV
I_F = 1 mA		-	318	340	
I_F = 10 mA		340	390	500	
Diode capacitance	C_T				pF
V_R = 1 V, f = 1 MHz		-	-	1	
Differential forward resistance	R_F				Ω
I_F = 5 mA		-	-	10	

Forward current $I_F = f\,(T_A{}^*; T_S)$
*): mounted on alumina 15mm x 16.7mm x 0.7mm
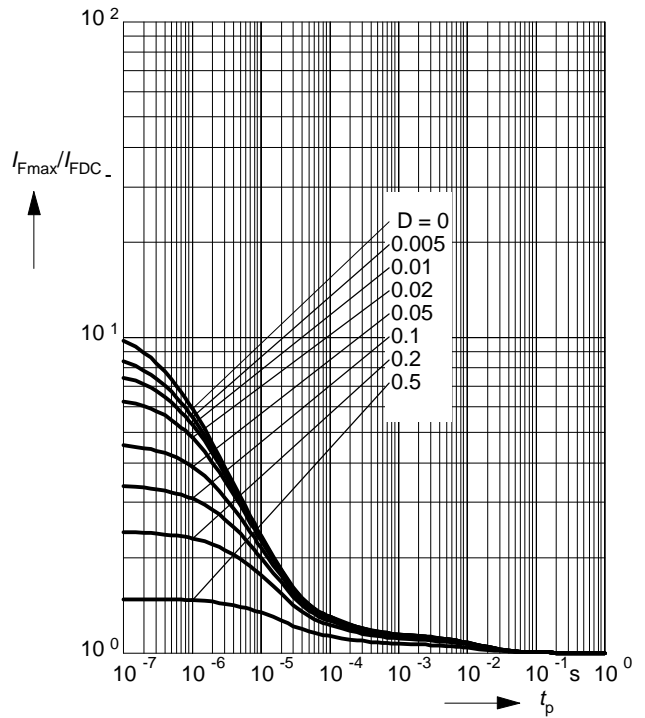BAT 68W

Forward current $I_F = f\,(T_A{}^*; T_S)$
*): mounted on alumina 15mm x 16.7mm x 0.7mm
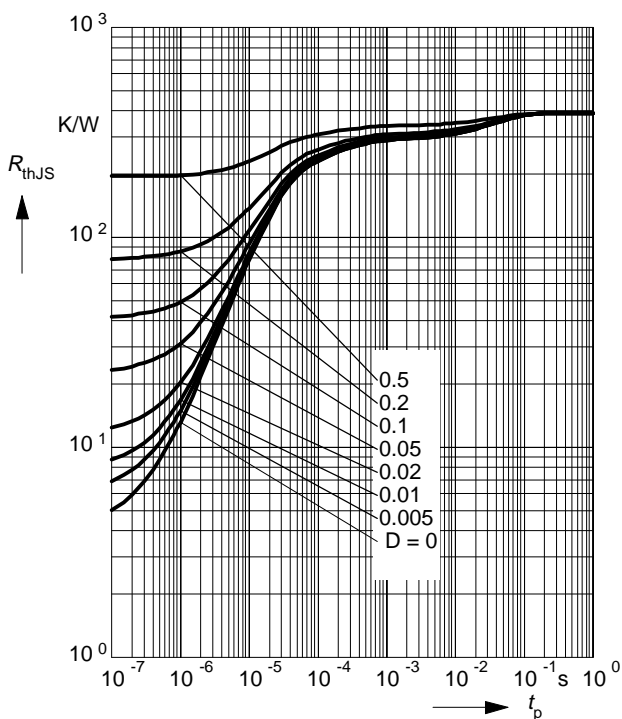BAT 68-04W, -05W, -06W

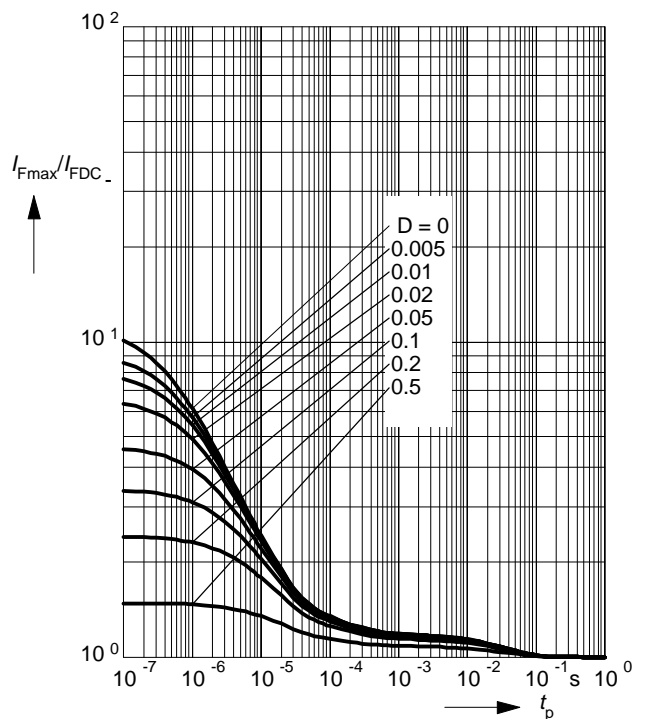**Permissible Pulse Load** $R_{THJS} = f(t_p)$
BAT 68W

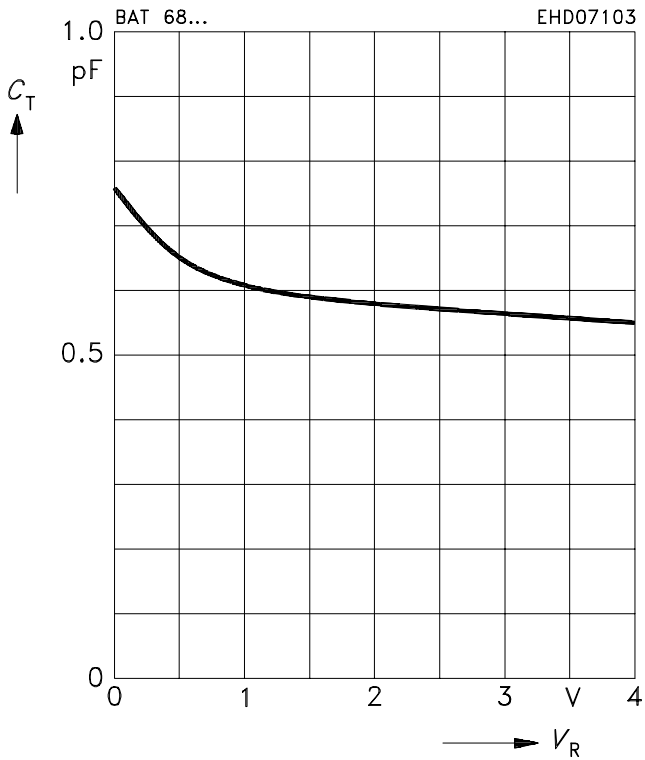**Permissible Pulse Load** $I_{Fmax}/I_{FDC} = f(t_p)$
BAT 68W

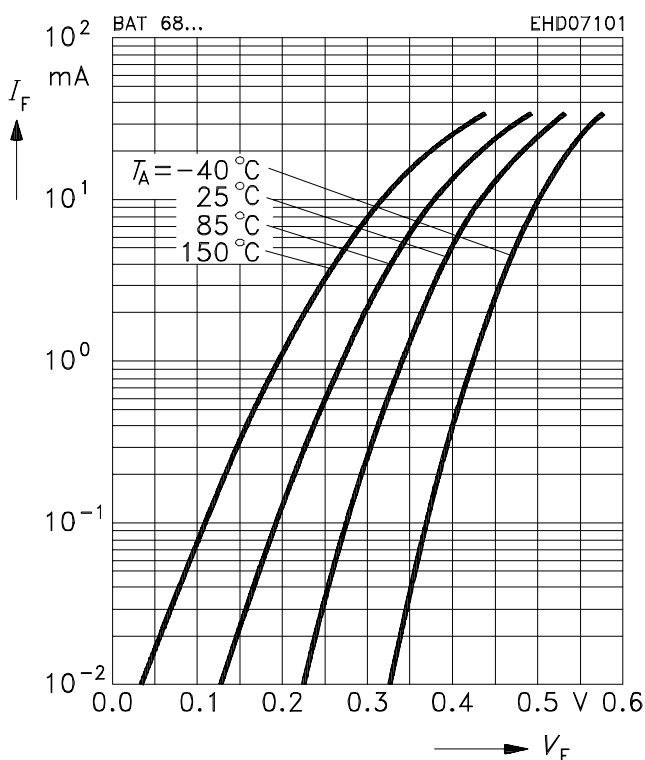**Permissible Pulse Load** $R_{THJS} = f(t_p)$
BAT 68-04W, -05W, -06W

Permissible Pulse Load $I_{Fmax}/I_{FDC} = f(t_p)$
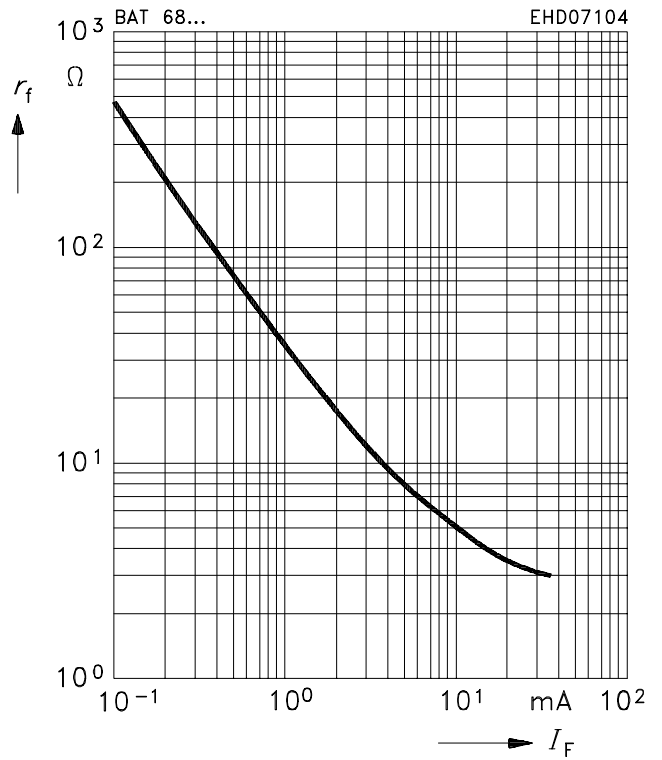BAT 68-04W, -05W, -06W

Diode capacitance $C_T = f(V_R)$
f = 1MHz

Differential forward resistance $r_f = f(I_F)$
f = 10kHz

Forward Current $I_F = f(V_F)$

Reverse current $I_R = f(T_A)$
V_R = 28V