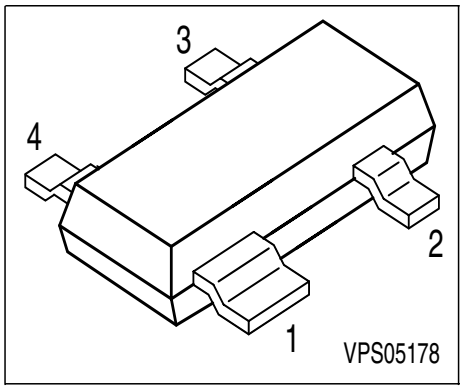
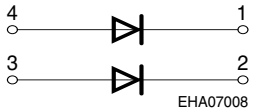
Silicon Schottky Diode

- For mixer applications in the VHF / UHF range
- For high-speed switching applications





Type	Marking	Pin Configuration				Package
BAT 17-07	57s	1 = C1	2 = C2	3 = A2	4 = A1	SOT-143

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	4	V
Forward current	I_F	130	mA
Total power dissipation, $T_S \leq 60$ °C	P_{tot}	150	mW
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	-55 ... 150	
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Junction - ambient [1)]	R_{thJA}	≤ 750	K/W
Junction - soldering point	R_{thJS}	≤ 590	

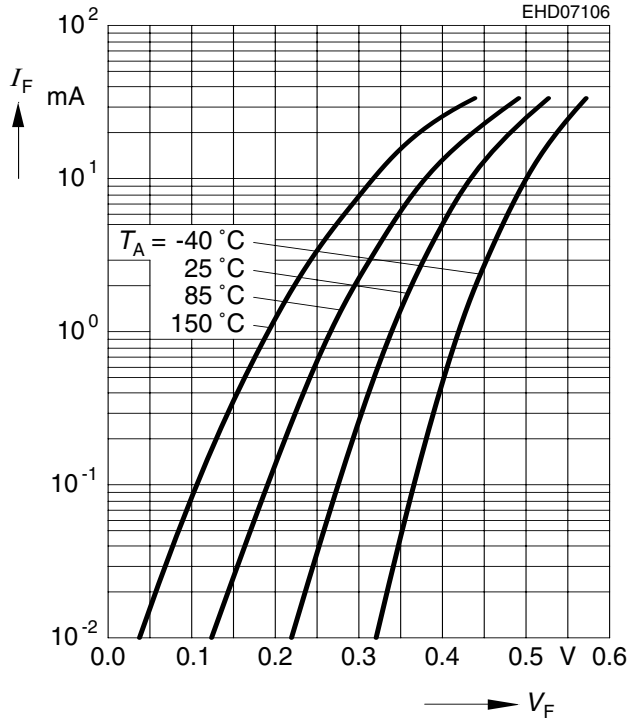
1) Package mounted on epoxy pcb 40mm x 40mm x 1.5mm / 1cm^2 Cu

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Breakdown voltage $I_{(BR)}$ = 10 µA	$V_{(BR)}$	4	-	-	V
Reverse current	I_R				µA
V_R = 3 V		-	-	0.25	
V_R = 4 V		-	-	10	
Reverse current V_R = 3 V, T_A = 60 °C	I_R	-	-	1.25	
Forward voltage	V_F				mV
I_F = 0.1 mA		200	275	350	
I_F = 1 mA		250	340	450	
I_F = 10 mA		350	425	600	
AC characteristics					
Diode capacitance V_R = 0 V, f = 1 MHz	C_T	-	0.75	1	pF
Differential forward resistance I_F = 5 mA, f = 10 kHz	r_f	-	8	15	Ω

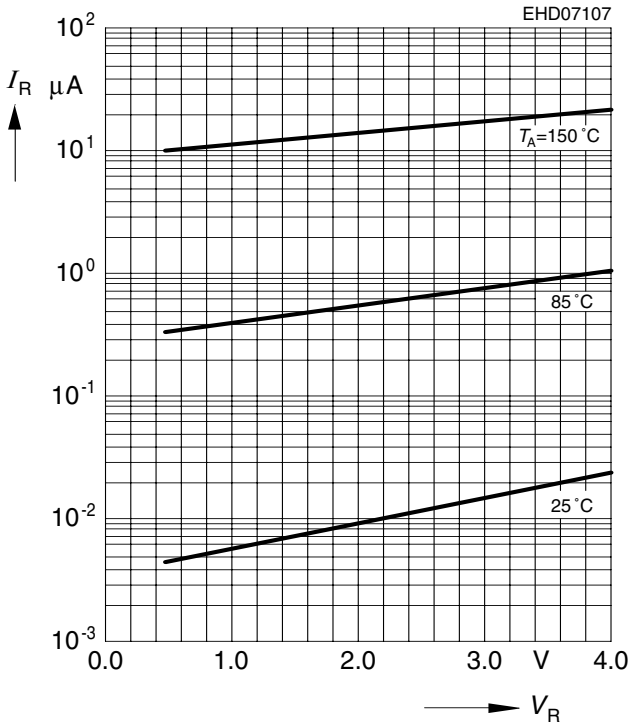
Forward current $I_F = f(V_F)$

T_A = Parameter



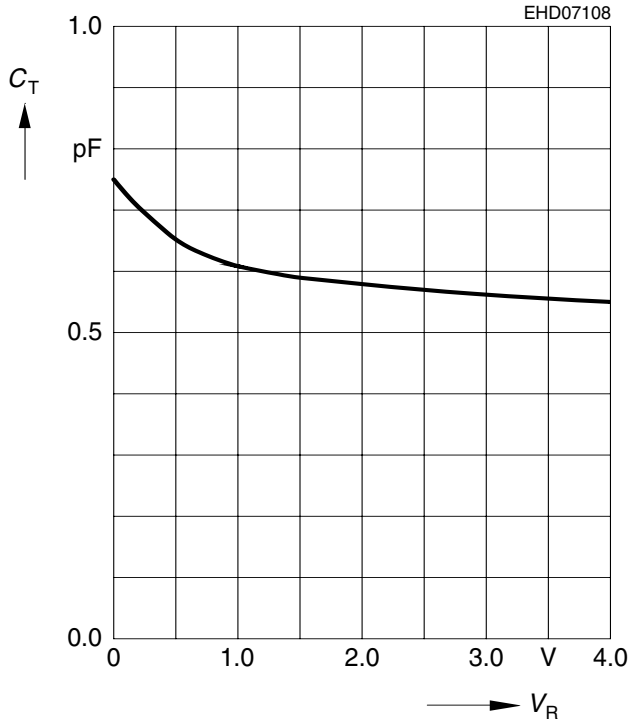
Reverse current $I_R = f(V_R)$

T_A = Parameter



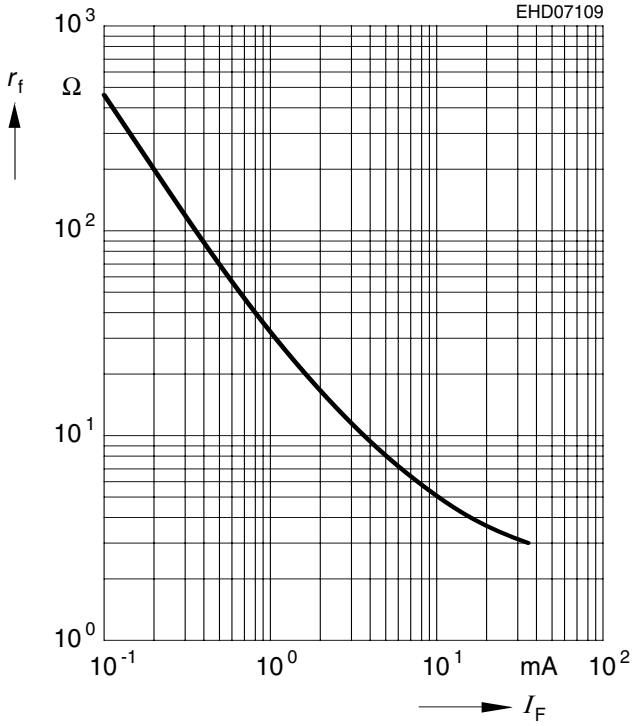
Diode capacitance $C_T = f(V_R)$

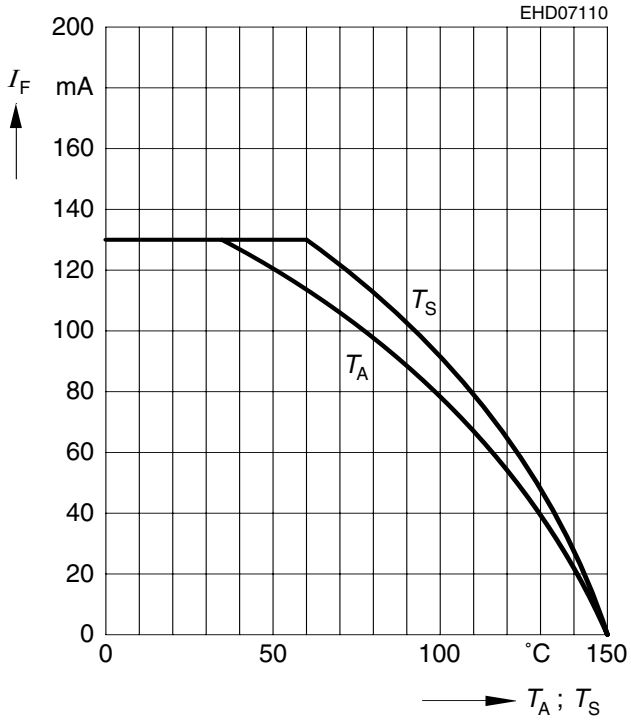
f = 1MHz



Differential forward resistance $r_f = f(I_F)$

f = 10 kHz



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

* Package mounted on epoxy