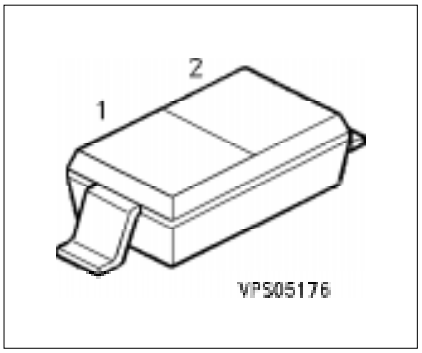
SIEMENS

Silicon Schottky Diode — BAT 65

Features

- Low-power Schottky rectifier diode
- For low-loss, fast-recovery rectification, meter protection, bias isolation and clamping purposes
- Miniature plastic package for surface mounting (SMD)



Type	Marking	Ordering Code	Pin Configuration		Package[1)]
			1	2	
BAT 65	White/C	Q62702-A990	C	A	SOD-123

[1)] Dimensions see page 313.

Maximum Ratings

Parameter	Symbol	Limit Values	Unit
Reverse voltage	V_R	40	V
Forward current	I_F	750	mA
Average forward current, f = 50 Hz	I_{FAV}	500	mA
Surage forward current, $t \leq 10$ ms	I_{FSM}	2.5	A
Total power dissipation, $T_S \leq 100$ °C	P_{tot}	600	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	– 55 … + 150	°C

Thermal Resistance

Parameter	Symbol	Limit Values	Unit
Junction - soldering point	R_{thJS}	≤ 80	K/W
Junction to ambient[1)]	R_{thJA}	≤ 150	K/W

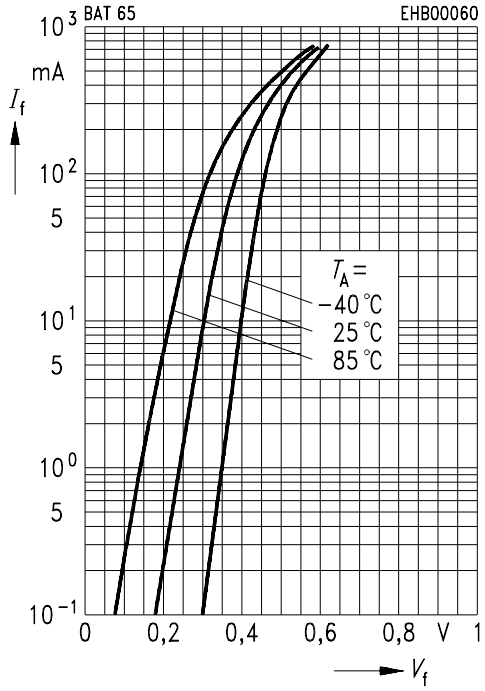
1) Package mounted on epoxy PCB 40 mm × 40 mm × 1.5 mm/6 cm² Cu.

Electrical Characteristics

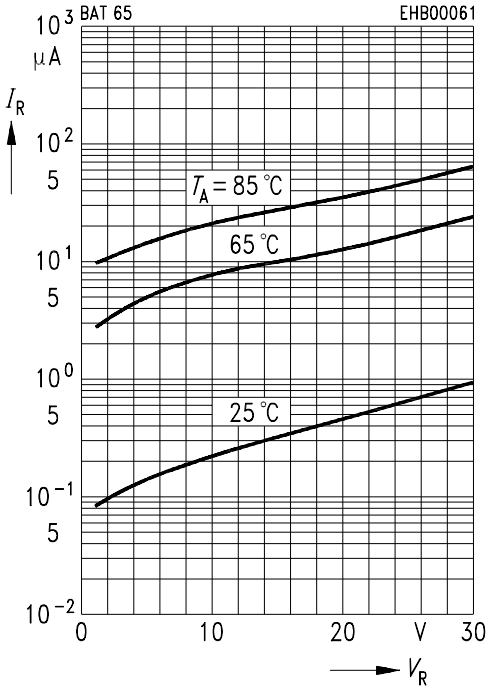
T_A = 25 °C, unless otherwise specified.

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Reverse current	I_R				µA
V_R = 30 V		–	–	50	
V_R = 30 V, T_A = 65 °C		–	–	900	
Forward voltage	V_F				V
I_F = 10 mA		–	0.305	0.40	
I_F = 100 mA		–	0.38	–	
I_F = 250 mA		–	0.44	0.70	
I_F = 750 mA		–	0.580	–	
Diode capacitance	C_T				pF
V_R = 10 V, f = 1 MHz		–	8.4	12	

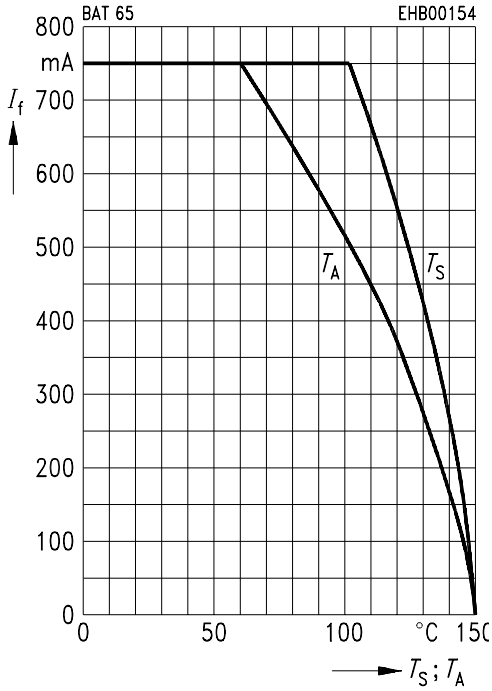
Forward Current $I_F = f(V_F)$



Reverse Current $I_R = f(V_R)$

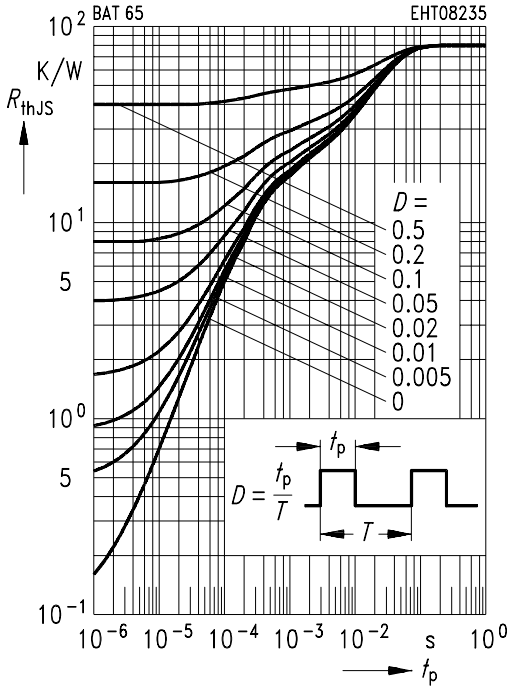


Forward Current $I_F = f(T_S; T_A^{1)})$



[1] Package mounted on epoxy PCB 40 mm × 40 mm × 1.5 mm/6 cm² Cu.

Permissible Load $R_{thJS} = f(t_P)$



Permissible Pulse Load $I_{fmax}/I_{fDC} = f(t_P)$