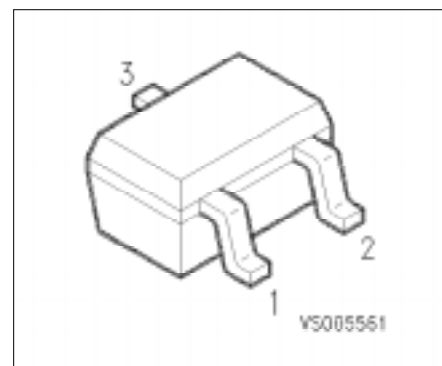


Silicon Schottky Diode

BAS 40W

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



Type	Ordering Code (tape and reel)	Pin Configuration			Marking	Package ¹⁾
		1	2	3		
BAS 40-04W	Q62702-A1065	A1	C1	C1/A2	44s	SOT-323
BAS 40-05W	Q62702-A1066	A1	A2	C1/C2	45s	
BAS 40-06W	Q62702-A1067	C1	C2	A1/A2	46s	

Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse voltage	V_R	40	V
Forward current	I_F	120	mA
Surge forward current, $t \leq 10$ ms	I_{FSM}	200	mA
Total power dissipation $T_S \leq 106$ °C	P_{tot}	250	mW
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	– 55 ... + 150	°C
Storage temperature range	T_{stg}	– 55 ... + 150	°C

Thermal Resistance

Junction-ambient ²⁾	$R_{th JA}$	≤ 395	K/W
Junction-soldering point	$R_{th JS}$	≤ 175	K/W

1) For detailed information see chapter Package Outlines.

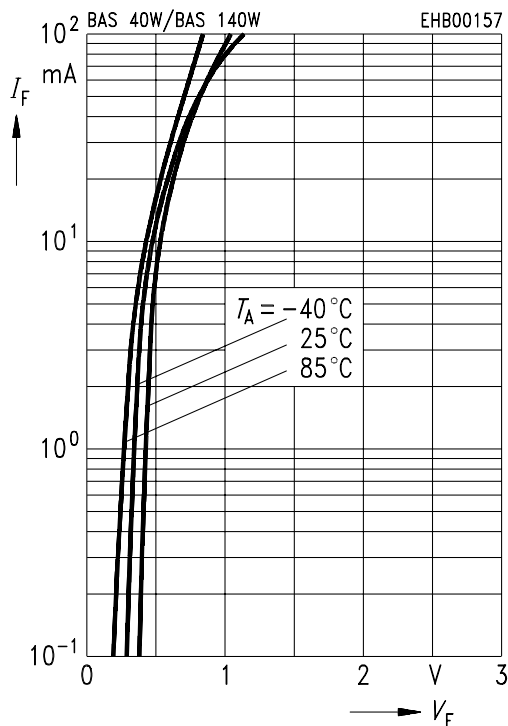
2) Package mounted on an epoxy pcb 40 mm x 40 mm x 1.5 mm/1 cm² Cu.

Electrical Characteristics

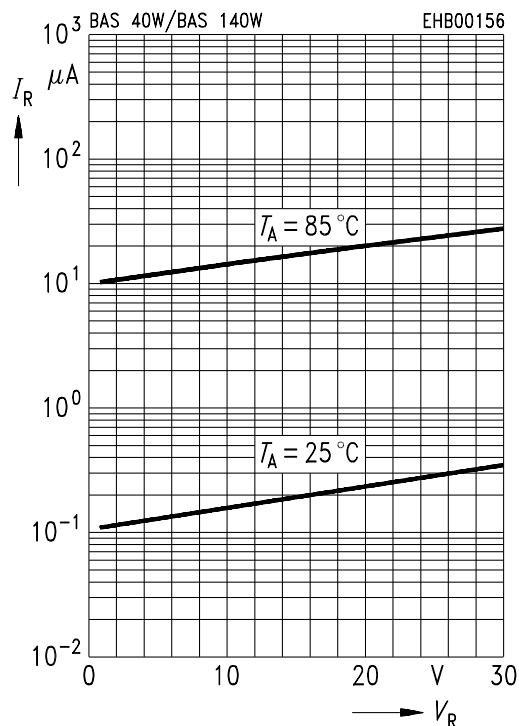
 at $T_A = 25\text{ °C}$, unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 10\text{ }\mu\text{A}$	$V_{(BR)}$	40	—	—	V
Forward voltage $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$ $I_F = 15\text{ mA}$	V_F	250 350 600	310 450 720	380 500 1000	mV
Reverse current $V_R = 30\text{ V}$ $V_R = 40\text{ V}$	I_R	— —	— —	1 10	μA
Diode capacitance $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_T	—	3	5	pF
Charge carrier life time $I_F = 25\text{ mA}$	τ	—	10	—	ps
Differential forward resistance $I_F = 10\text{ mA}$, $f = 10\text{ kHz}$	R_F	—	10	—	Ω
Series inductance	L_S	—	2	—	nH

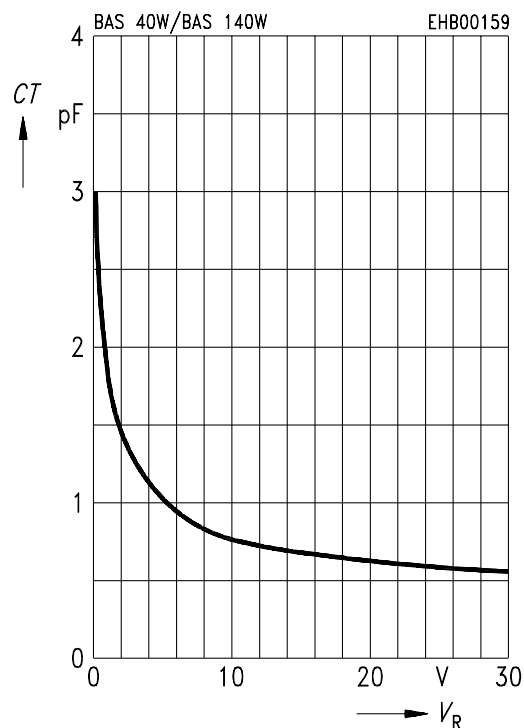
Forward current $I_F = f(V_F)$



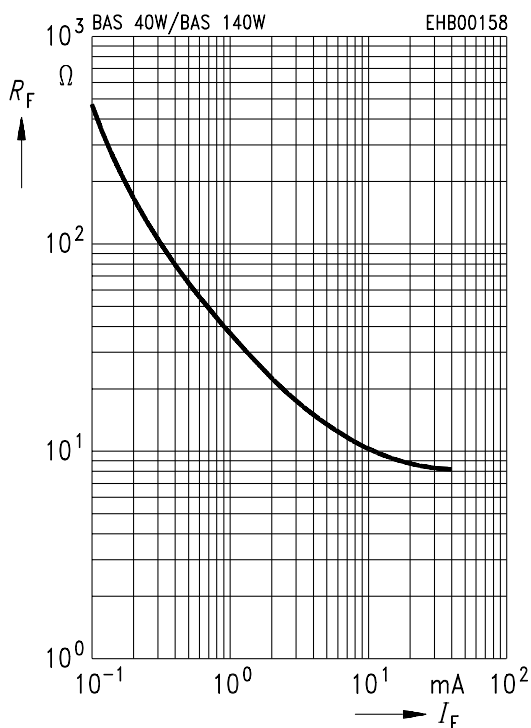
Reverse current $I_R = f(V_R)$



Diode capacitance $C_T = f(V_R)$

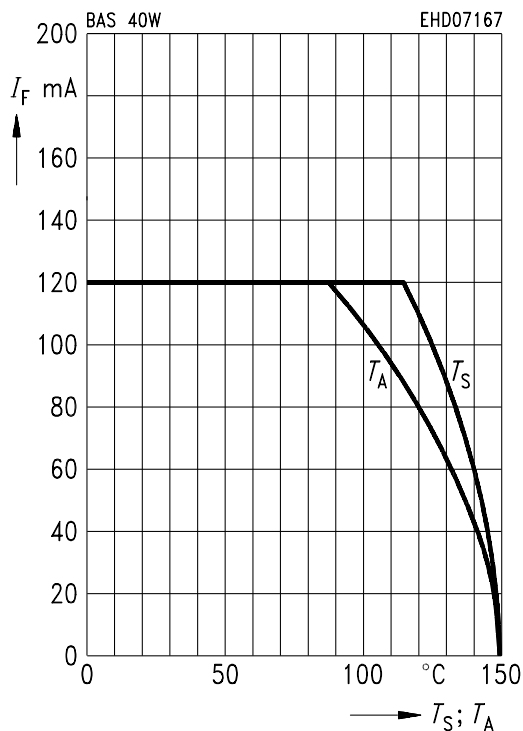


Differential forward resistance $R_F = f(I_F)$

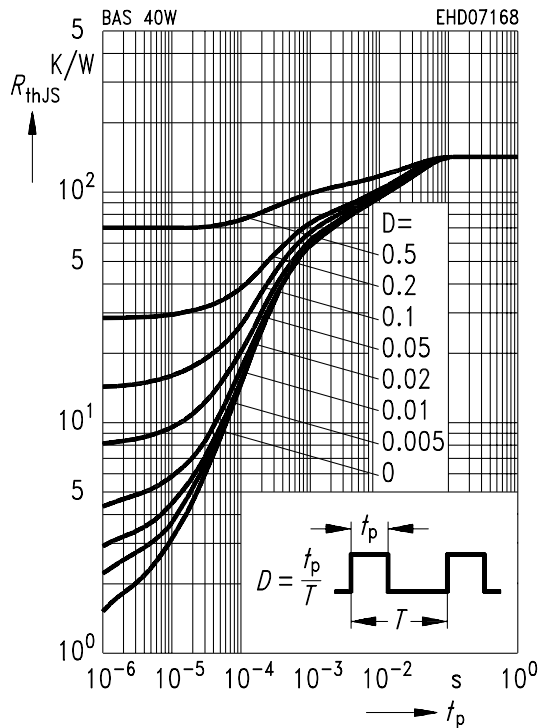


Forward current $I_F = f(T_A; T_S^*)$

*Package mounted on epoxy



Permissible load $R_{thJS} = f(t_p)$



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

