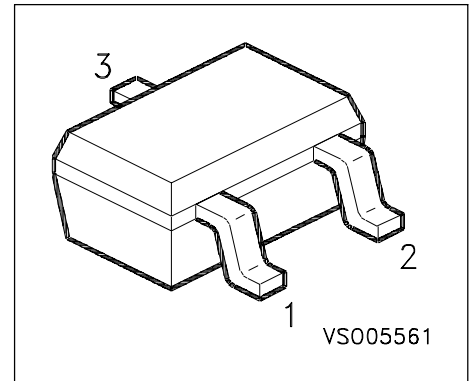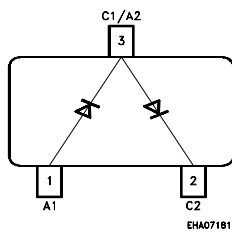## Silicon Schottky Diodes

Preliminary data
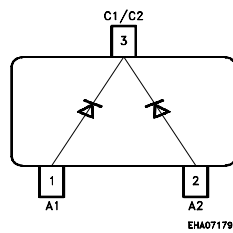
• For low-loss, fast-recovery, meter protection,

  bias isolation and clamping application

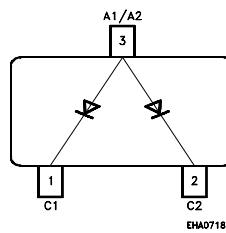• Integrated diffused guard ring

• Low forward voltage

VS005561

BAS 125-04W   BAS 125-04W   BAS 125-06W

C1/A2
3
1 A1   2 C2
EHA07181

C1/C2
3
1 A1   2 A2
EHA07179

A1/A2
3
1 C1   2 C2
EHA07187

ESD: **E**lectro**S**tatic **D**ischarge sensitive device, observe handling precautions!

Type	Marking	Ordering Code	Pin Configuration			Package
BAS 125-04W	14s	Q62702-	1 = A1	2 = C2	3=C1/A2	SOT-323
BAS 125-05W	15s	Q62702-	1 = A1	2 = A2	3=C1/C2	SOT-323
BAS 125-06W	16s	Q62702-	1 = C1	2 = C2	3=A1/A2	SOT-323
BAS 125W	13s	Q62702-	1 = A		3 = C	SOT-323

Maximum Ratings

Parameter	Symbol	Values	Unit
Diode reverse voltage	V_R	25	V
Forward current	I_F	100	mA
Surge forward current ($t \leq 10$ms)	I_{FSM}	500	
Total Power dissipation $T_S \leq 25\ °C$	P_{tot}	250	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	- 55 ... + 150	

Thermal Resistance

	Symbol	Values	Unit
Junction ambient, BAS125W 1)	R_{thJA}	≤ 310	K/W
Junction ambient, BAS 125-04W...06W 1)	R_{thJA}	≤ 425	
Junction - soldering point, BAS125W	R_{thJS}	≤ 230	
Junction - soldering point, BAS125-04W...06W	R_{thJS}	≤ 265	

1) Package mounted on alumina 15mm x 16.7mmm x 0.7mm

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Reverse current	I_R				nA
V_R = 20 V		-	-	150	
V_R = 25 V		-	-	200	
Forward voltage	V_F				mV
I_F = 1 mA		-	385	400	
I_F = 10 mA		-	530	650	
I_F = 35 mA		-	800	900	
AC Characteristics					
Diode capacitance	C_T				pF
V_R = 0 V, f = 1 MHz		-	-	1.1	
Differential forward resistance	R_F				Ω
I_F = 5 mA, f = 10 kHz		-	16	-	

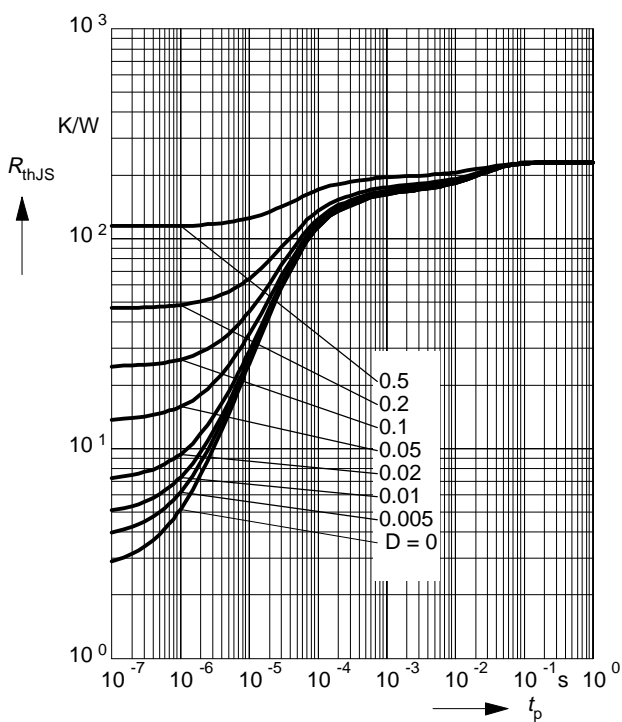**Forward current** $I_F = f(T_A*; T_S)$
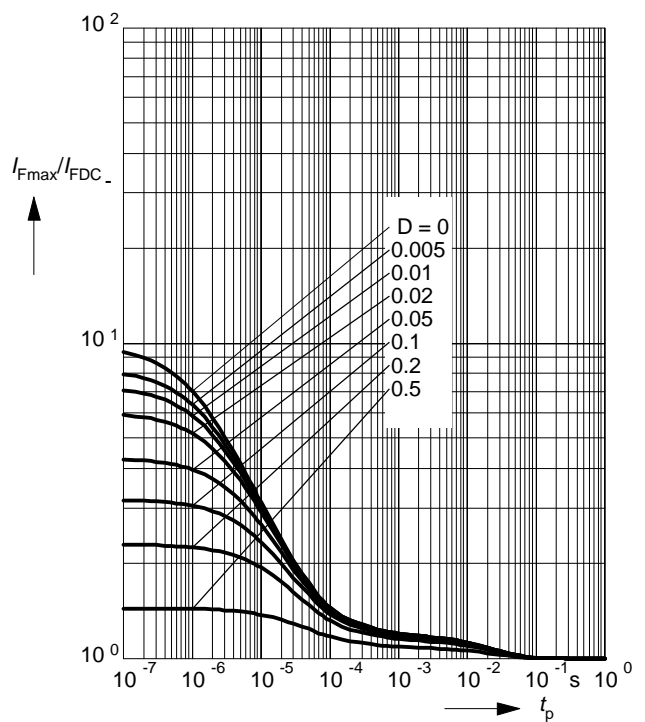* Package mounted on epoxy
BAS 125W

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

BAS 125W

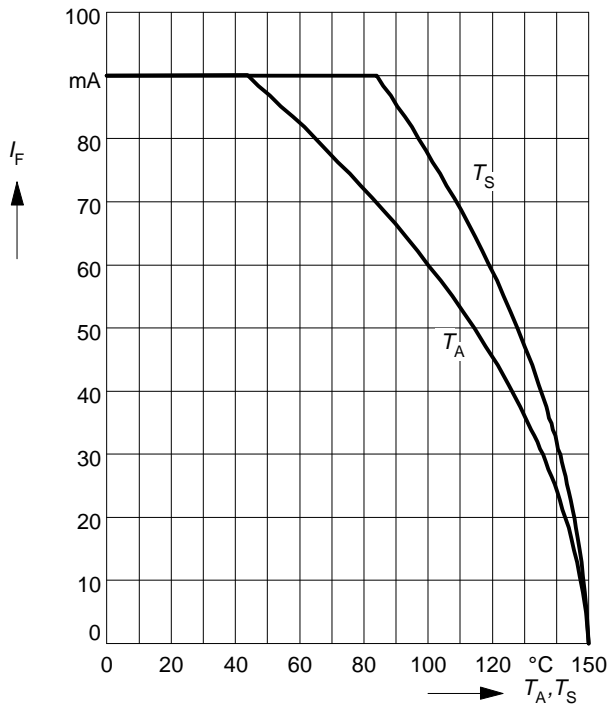**Permissible Pulse Load** $I_{Fmax}/I_{FDC} = f(t_p)$

BAS 125W

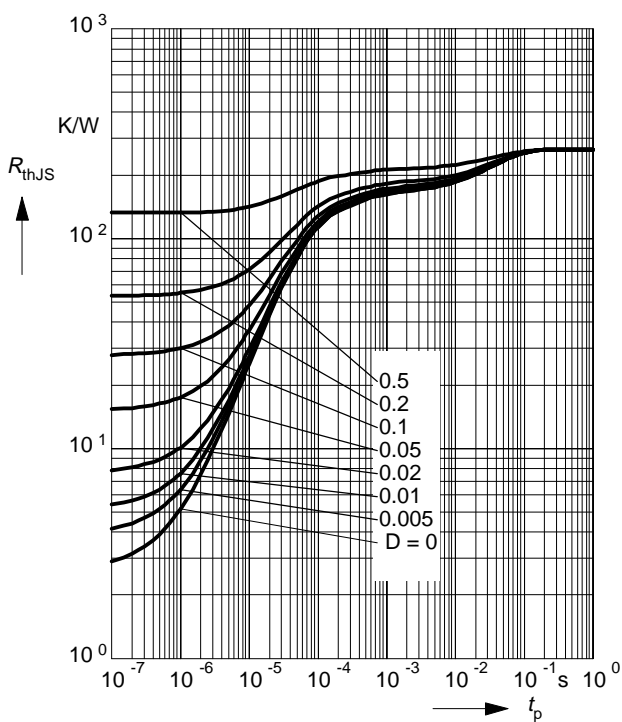**Forward current** $I_F = f(T_A*; T_S)$
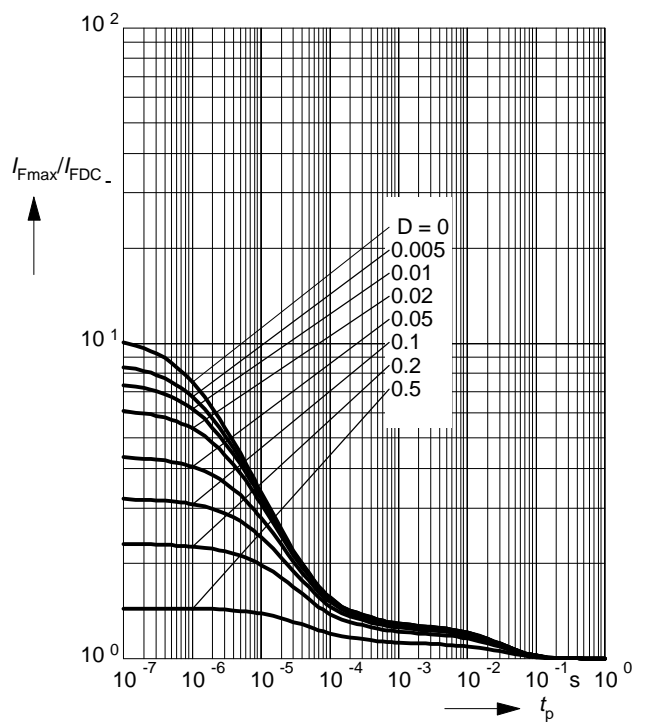* Package mounted on epoxy
BAS 125-04W... (I_F per diode)

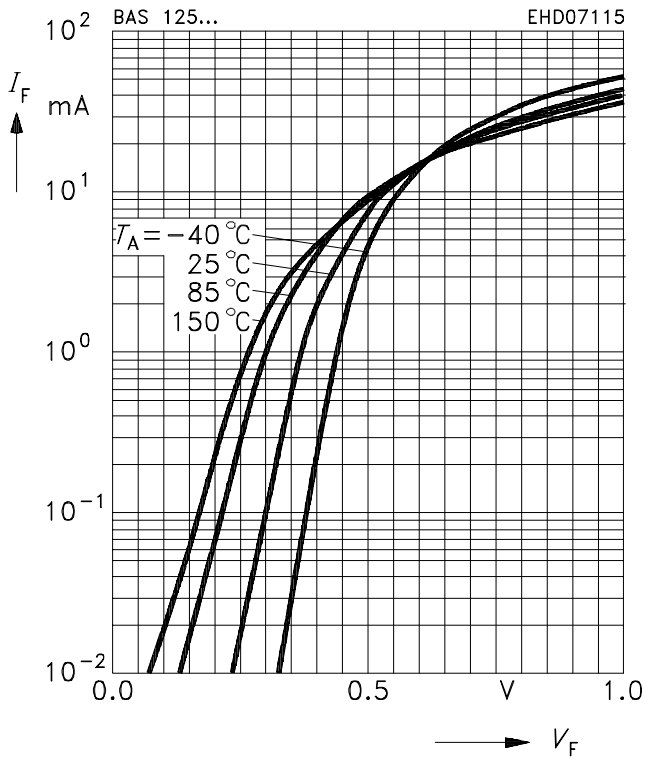**Permissible Pulse Load** $R_{THJS} = f(t_p)$

BAS 125-04W...

Permissible Pulse Load $I_{Fmax}/I_{FDC} = f(t_p)$
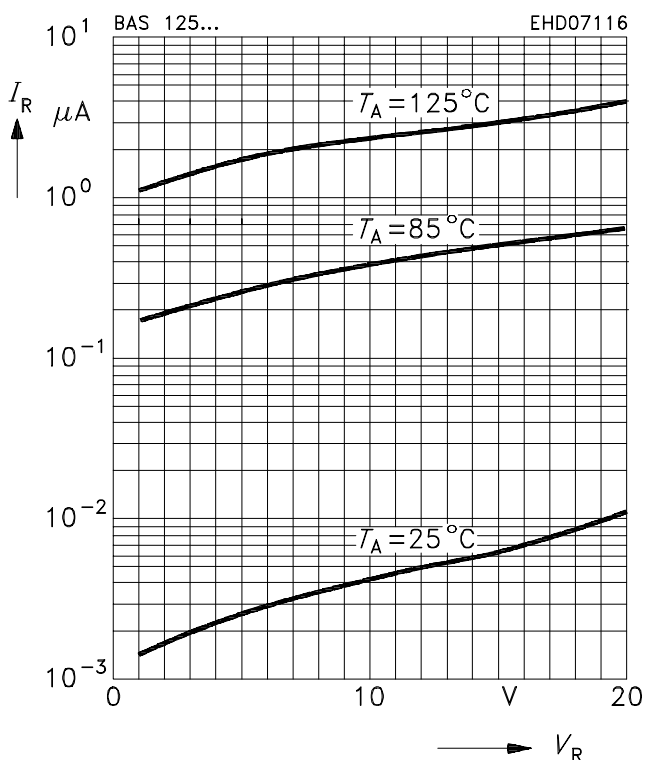
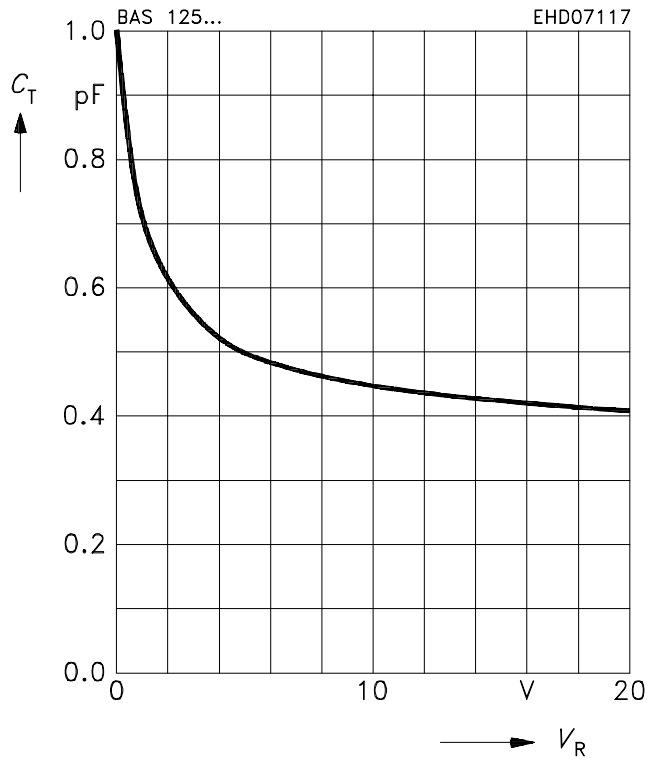BAS 125-04W...

Forward Current $I_F = f(V_F)$

Diode capacitance $C_T = f(V_R)$
$f = 1\text{MHz}$

Reverse current $I_R = f(V_R)$

T_A = Parameter

Differential forward resistance $R_F = f(I_F)$
$f = 10\text{kHz}$