

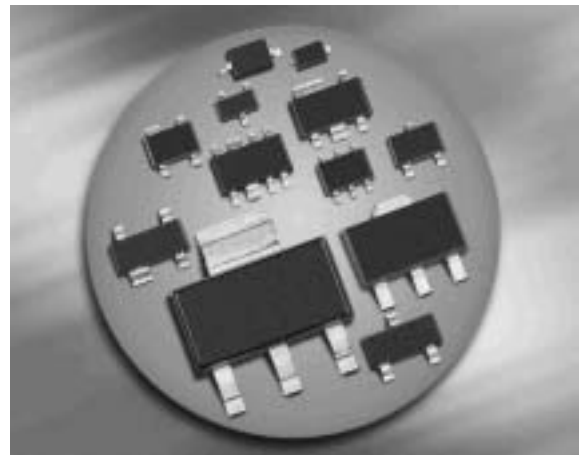
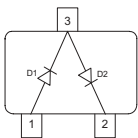
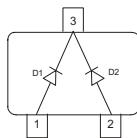
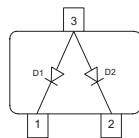
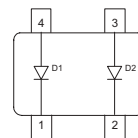


THE DATASHEET OF BAS125



Silicon Schottky Diodes

- For low-loss, fast-recovery, meter protection, bias isolation and clamping application
- Integrated diffused guard ring
- Low forward voltage
- Pb-free (RoHS compliant) package ¹⁾
- Qualified according AEC Q101


BAS125-04W

BAS125-05W

BAS125-06W

BAS125-07W


ESD (Electrostatic discharge) sensitive device, observe handling precaution!

Type	Package	Configuration	L_S (nH)	Marking
BAS125-04W	SOT323	series	1.4	14s
BAS125-05W	SOT323	common cathode	1.4	15s
BAS125-06W	SOT323	common anode	1.4	16s
BAS125-07W	SOT343	parallel pair	1.6	17s

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	25	V
Forward current	I_F	100	mA
Non-repetitive peak surge forward current	I_{FSM}	500	
Total power dissipation	P_{tot}		mW
BAS125-04W, BAS125-06W, $T_S \leq 84^\circ\text{C}$		250	
BAS125-05W, $T_S \leq 76^\circ\text{C}$		250	
BAS125-07W, $T_S \leq 96^\circ\text{C}$		250	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ... 150	

¹Pb-containing package may be available upon special request

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾ BAS125-04W, BAS125-06W BAS125-05W BAS125-07W	R_{thJS}	≤ 365 ≤ 295 ≤ 215	K/W

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC Characteristics

Reverse current $V_R = 20\text{ V}$ $V_R = 25\text{ V}$	I_R	- -	- -	100 150	nA
Forward voltage $I_F = 1\text{ mA}$ $I_F = 10\text{ mA}$ $I_F = 35\text{ mA}$	V_F	- - -	385 530 800	400 650 950	mV
Forward voltage matching ²⁾ $I_F = 10\text{ mA}$	ΔV_F	-	-	20	

AC Characteristics

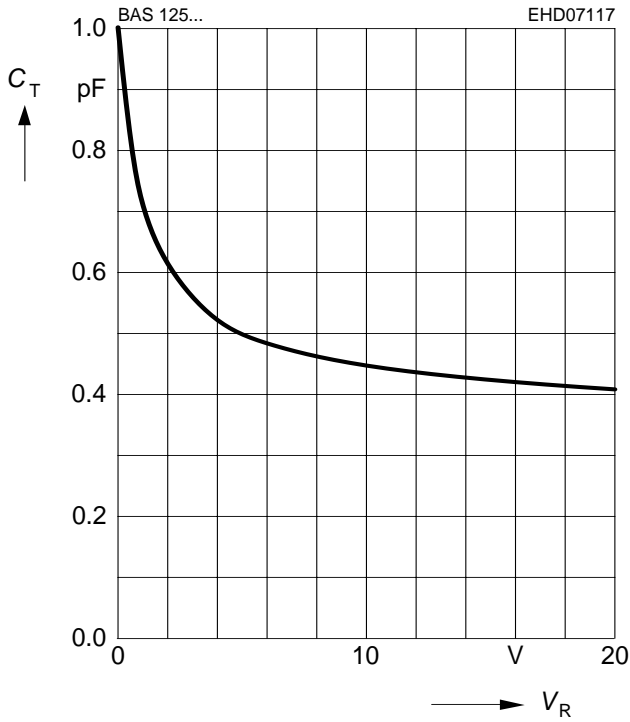
Diode capacitance $V_R = 0$, $f = 1\text{ MHz}$	C_T	-	-	1.1	pF
Differential forward resistance $I_F = 5\text{ mA}$, $f = 10\text{ kHz}$	R_F	-	15	-	Ω

¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

²⁾ ΔV_F is the difference between lowest and highest V_F in a multiple diode component.

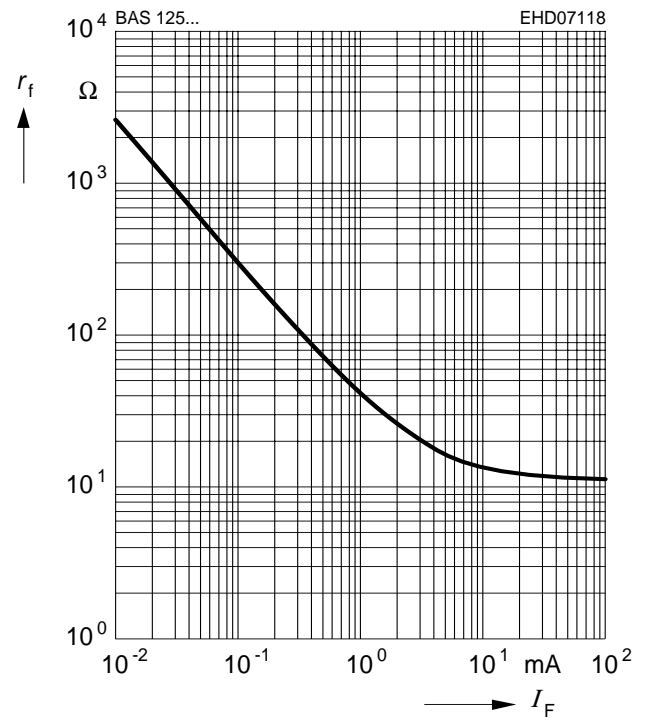
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



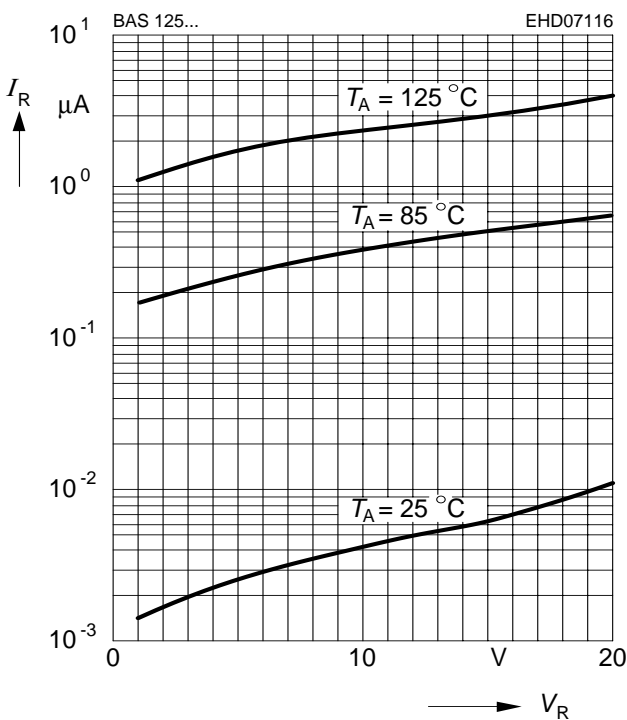
Forward resistance $r_f = f(I_F)$

$f = 10\text{kHz}$



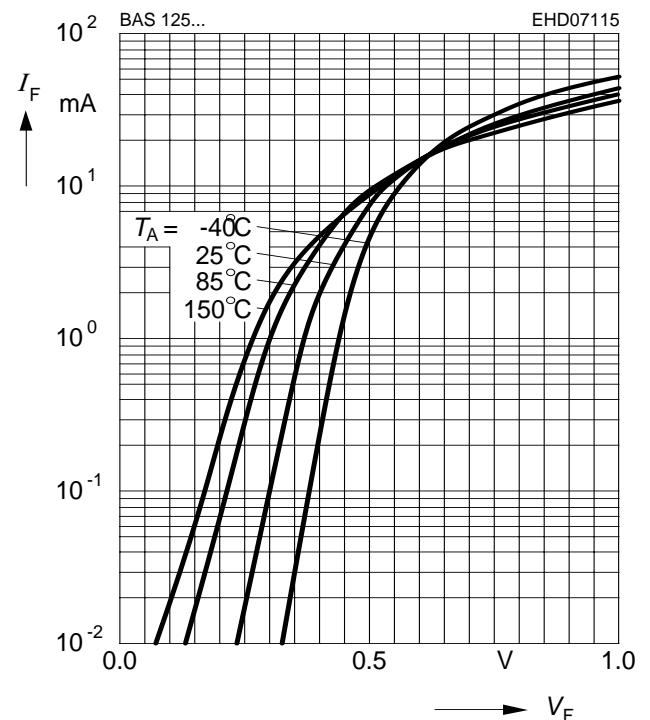
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



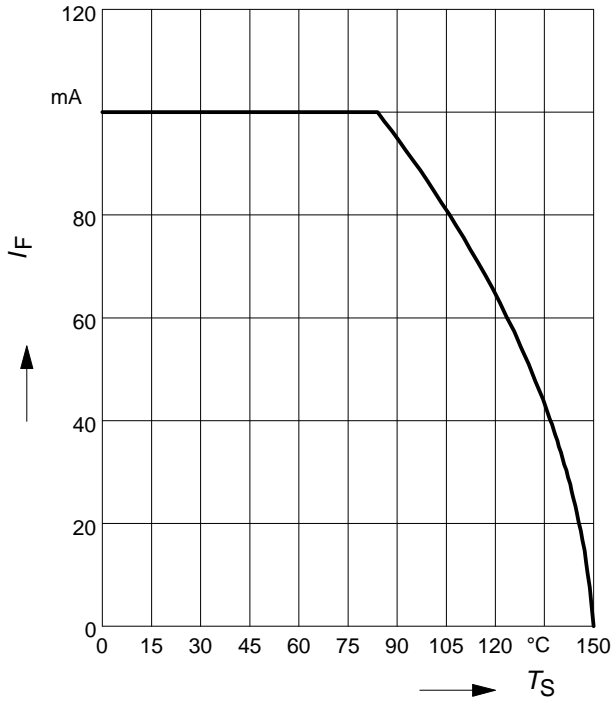
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



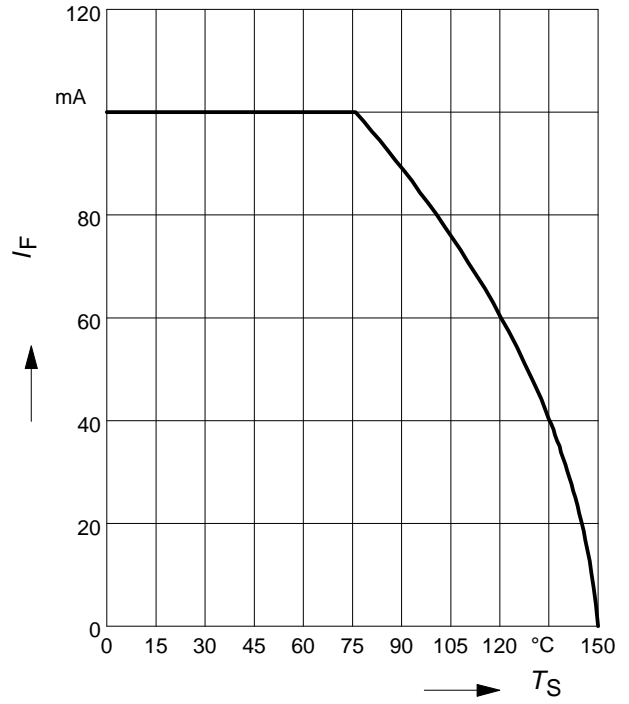
Forward current $I_F = f(T_S)$

BAS125-04W, BAS125-06W



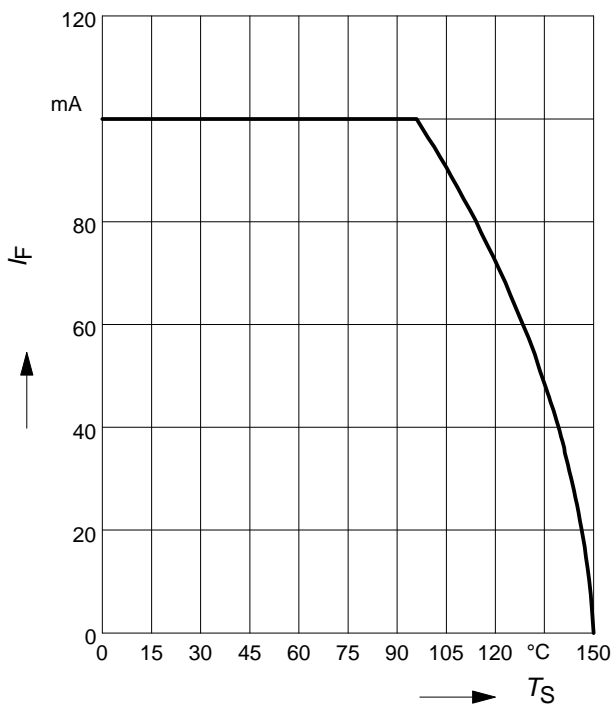
Forward current $I_F = f(T_S)$

BAS125-05W



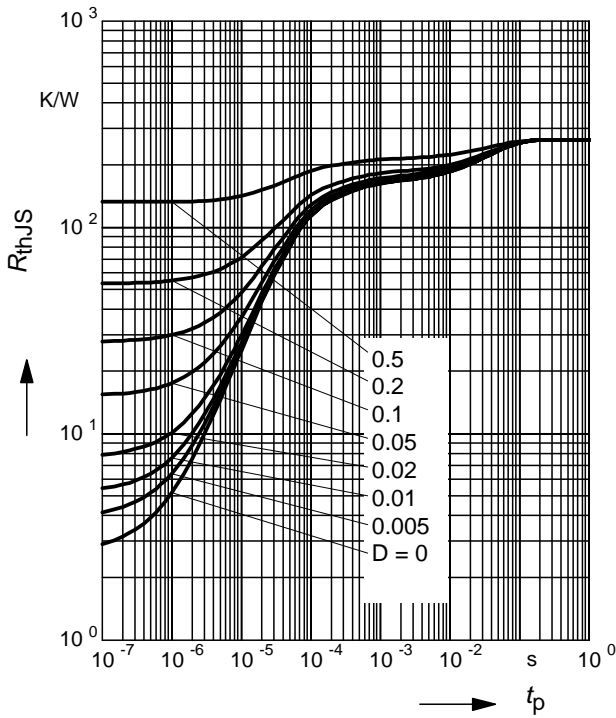
Forward current $I_F = f(T_S)$

BAS125-07W



Permissible Puls Load $R_{thJS} = f(t_p)$

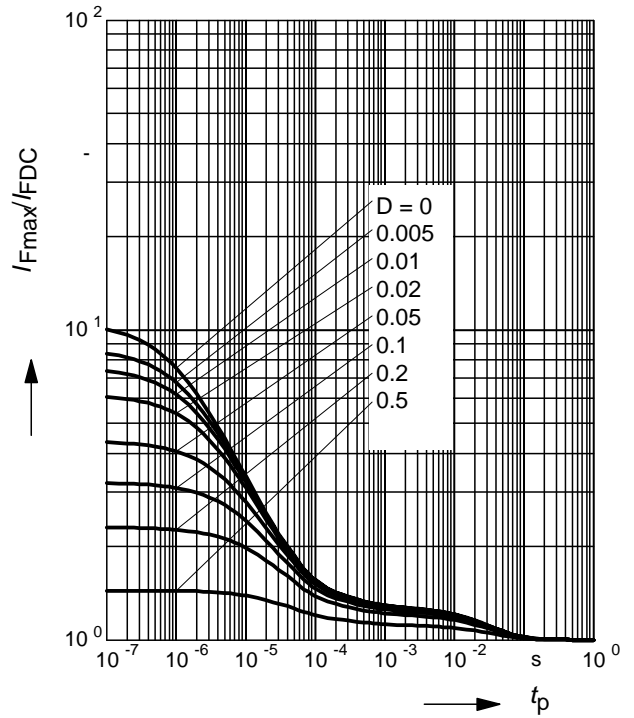
BAS125-04W, BAS125-06W



Permissible Pulse Load

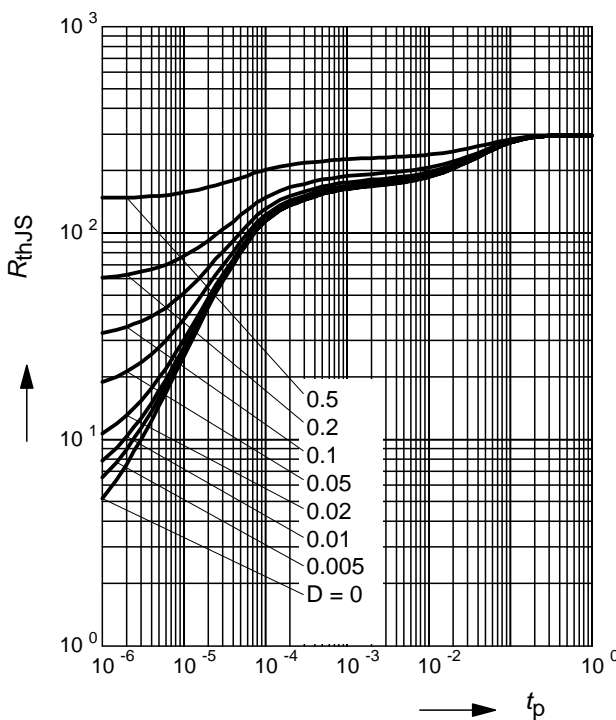
$I_{Fmax} / I_{FDC} = f(t_p)$

BAS125-04W, BAS125-06W



Permissible Puls Load $R_{thJS} = f(t_p)$

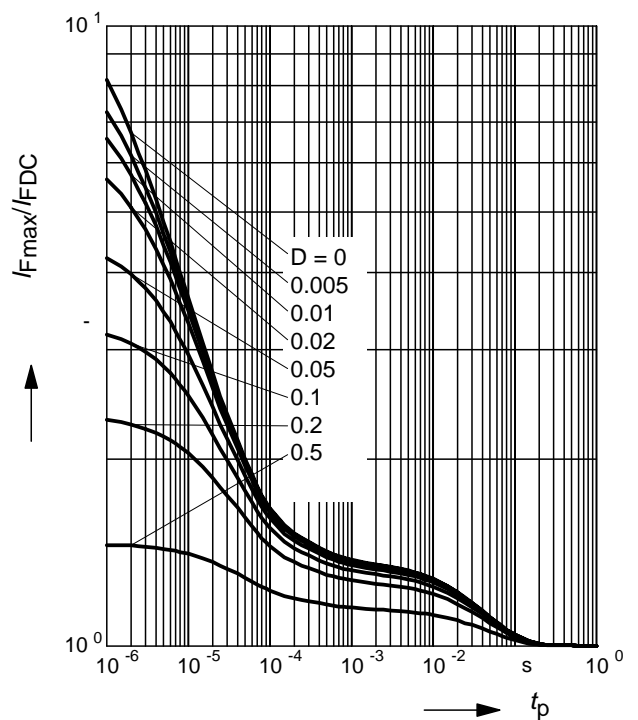
BAS125-05W



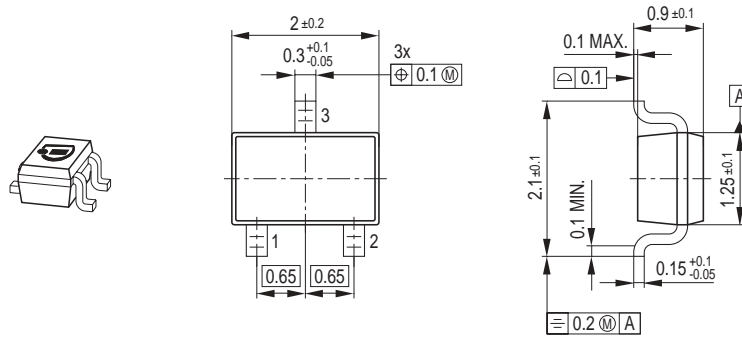
Permissible Pulse Load

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

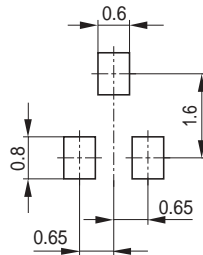
BAS125-05W



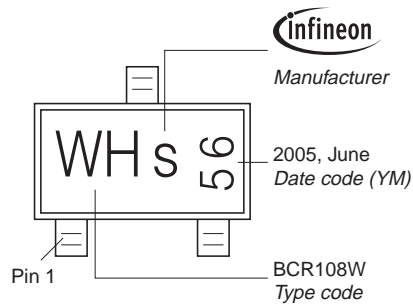
Package Outline



Foot Print

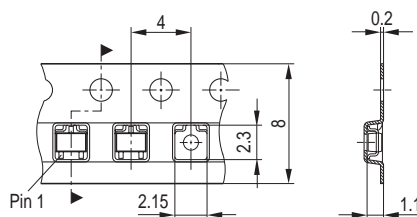


Marking Layout (Example)

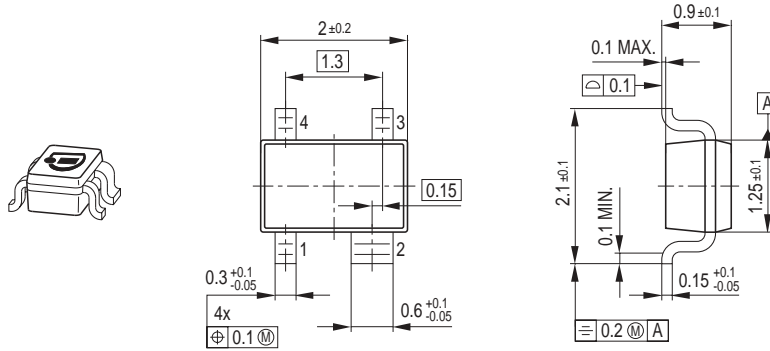


Standard Packing

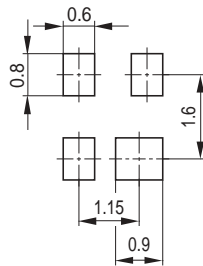
Reel \varnothing 180 mm = 3.000 Pieces/Reel
 Reel \varnothing 330 mm = 10.000 Pieces/Reel



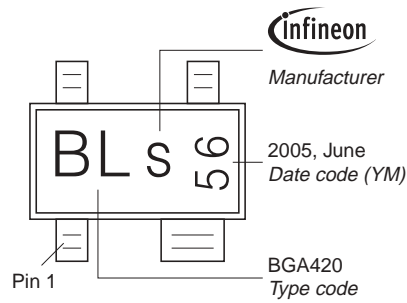
Package Outline



Foot Print

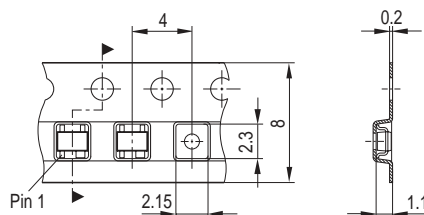


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel
 Reel ø330 mm = 10.000 Pieces/Reel



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