

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾	R_{thJS}		K/W
BAS21		≤ 230	
BAS21-03W		≤ 105	
BAS21U		≤ 110	

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

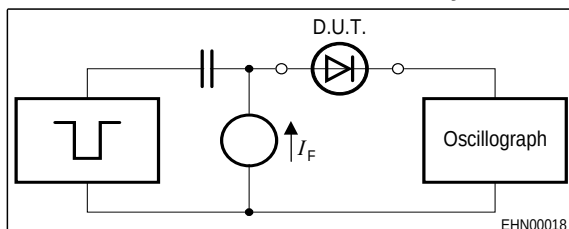
Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC Characteristics

Breakdown voltage $I_{(BR)} = 100 \mu\text{A}$	$V_{(BR)}$	250	-	-	V
Reverse current $V_R = 200 \text{ V}$ $V_R = 200 \text{ V}, T_A = 150^\circ\text{C}$	I_R	- -	- -	0.1 100	μA
Forward voltage $I_F = 100 \text{ mA}$ $I_F = 200 \text{ mA}$	V_F	- -	- -	1 1.25	V

AC Characteristics

Diode capacitance $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	C_T	-	-	5	pF
Reverse recovery time $I_F = 30 \text{ mA}, I_R = 30 \text{ mA}$, measured at $I_R = 3 \text{ mA}$, $R_L = 100 \Omega$	t_{rr}	-	-	50	ns

Test circuit for reverse recovery time


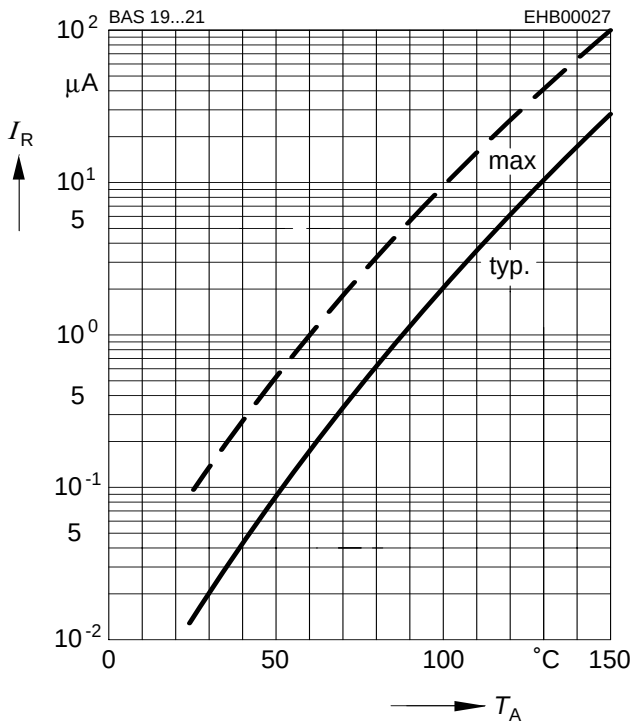
Puls generator: $t_p = 1 \mu\text{s}$, $D = 0.05$
 $t_r = 0.6 \text{ ns}$, $R_i = 50 \Omega$

Oscilloscope: $R = 50 \Omega$, $t_r = 0.35 \text{ ns}$, $C \leq 1 \text{ pF}$

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

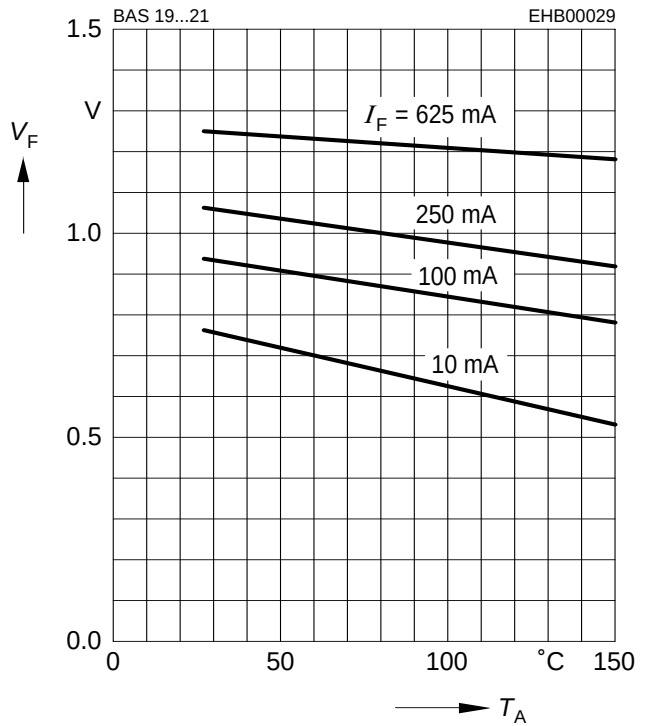
Reverse current $I_R = f(T_A)$

$V_R = 200V$

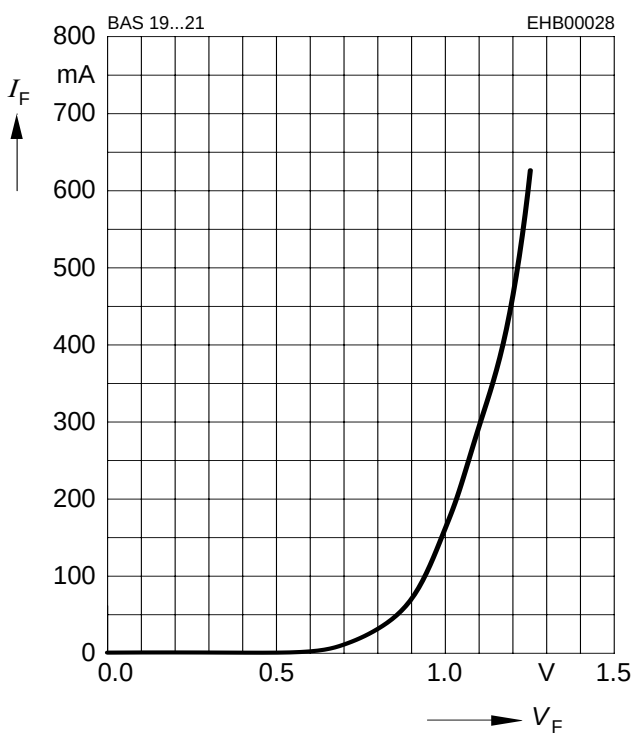


Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$

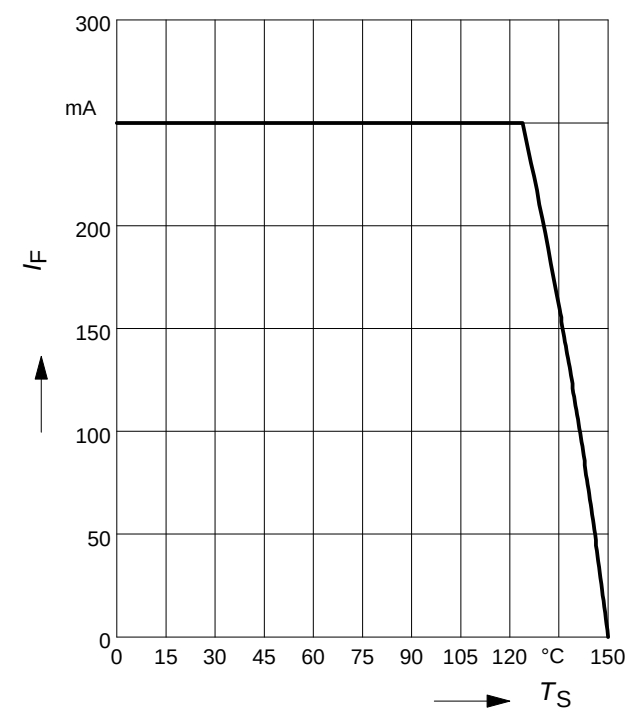


Forward current $I_F = f(V_F)$



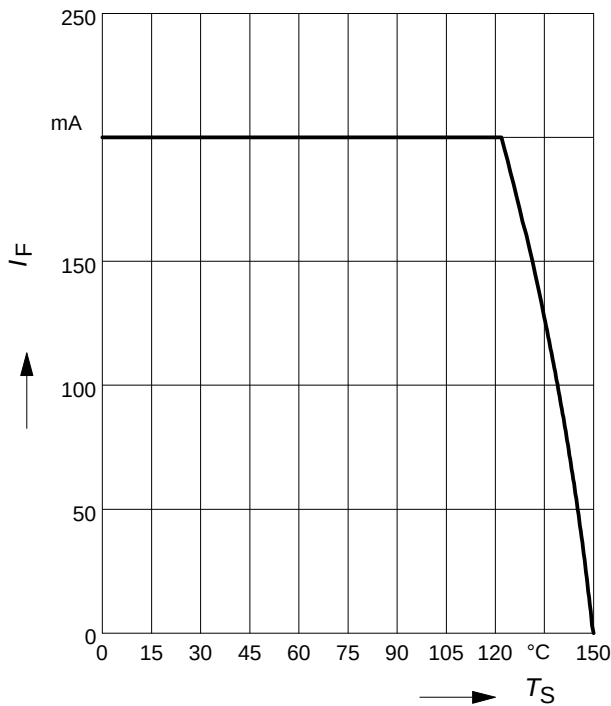
Forward current $I_F = f(T_S)$

BAS21-03W



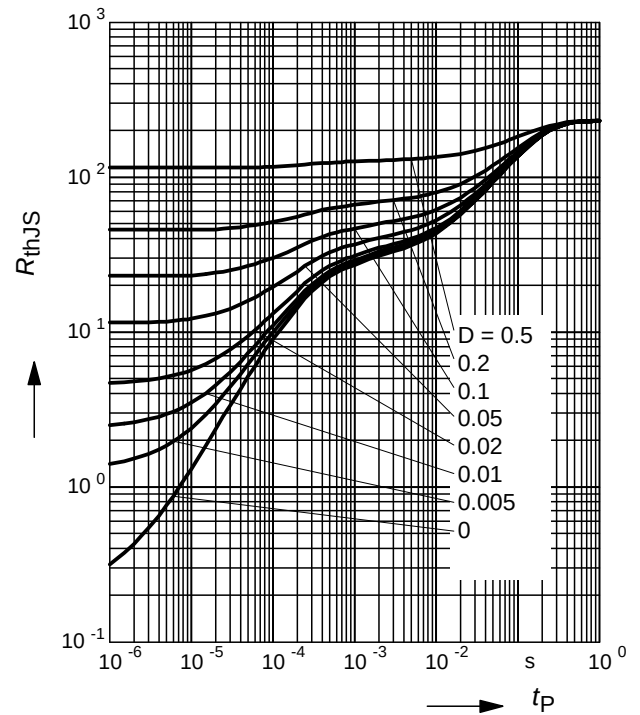
Forward current $I_F = f(T_S)$

BAS21U



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

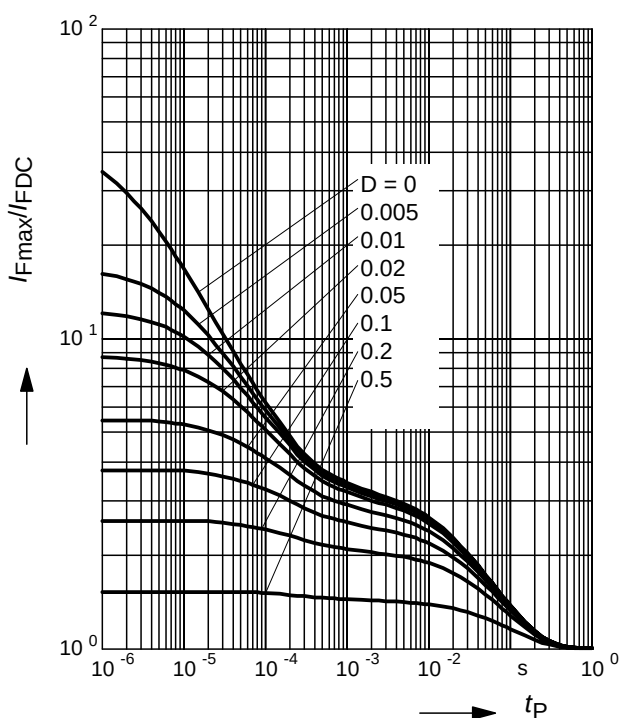
BAS21



Permissible Pulse Load

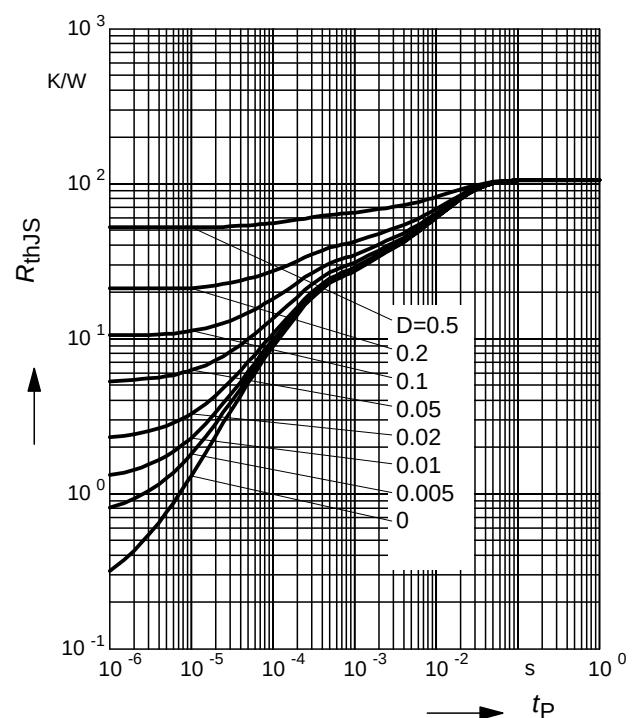
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAS21



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

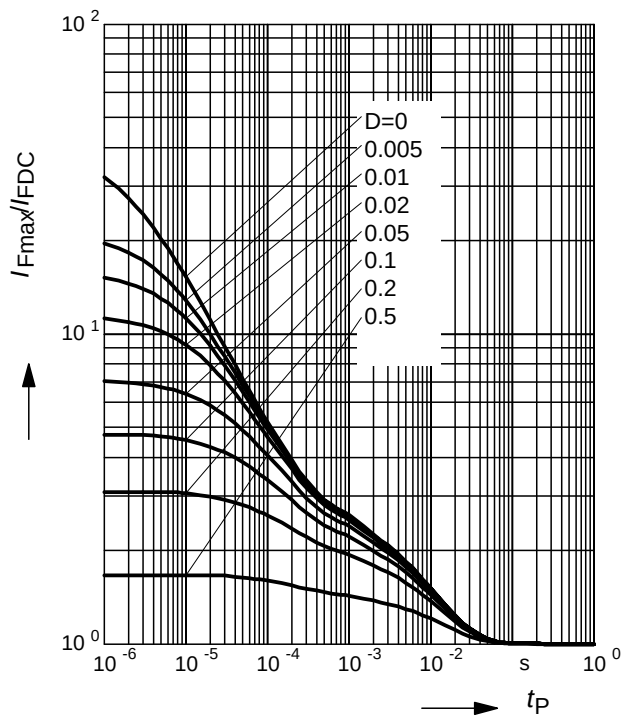
BAS21-03W



Permissible Pulse Load

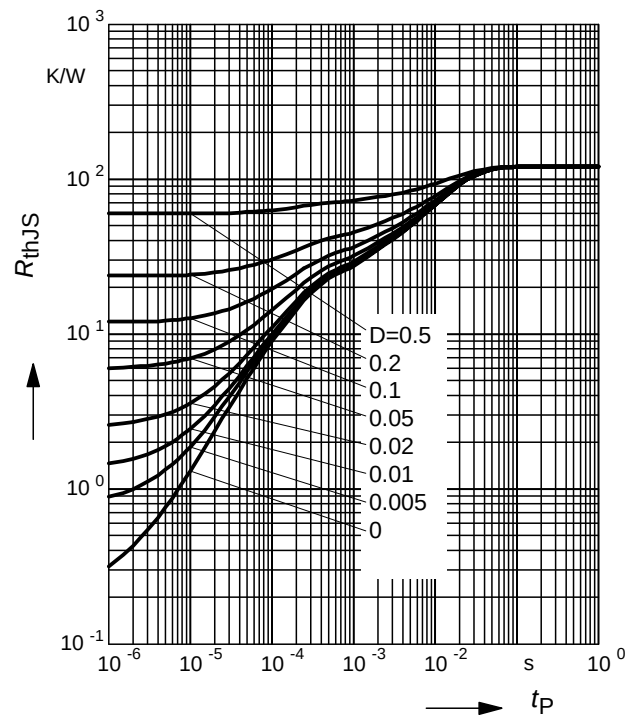
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAS21-03W



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

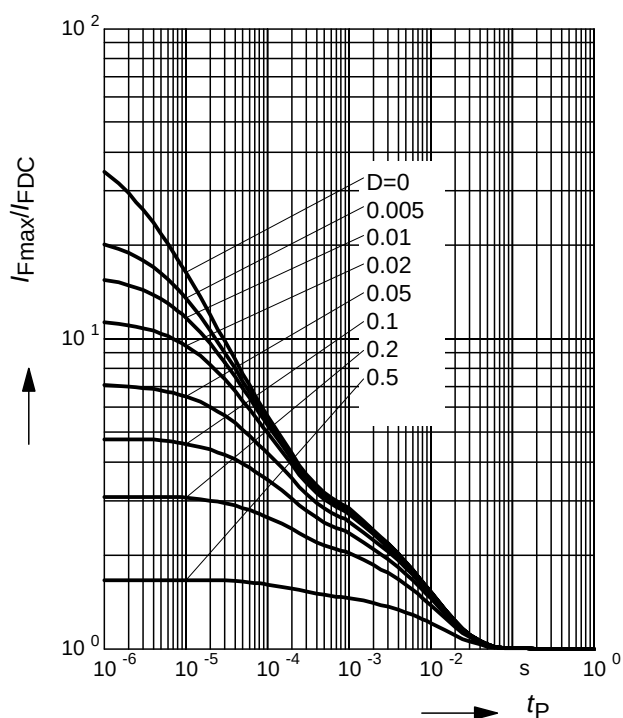
BAS21U



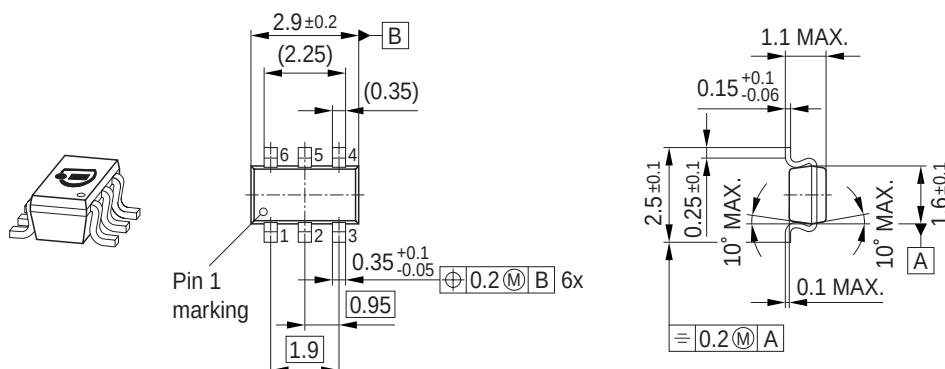
Permissible Pulse Load

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

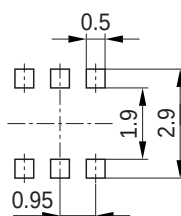
BAS21U



Package Outline

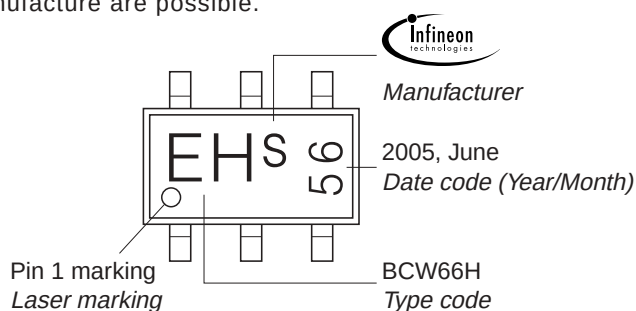


Foot Print



Marking Layout (Example)

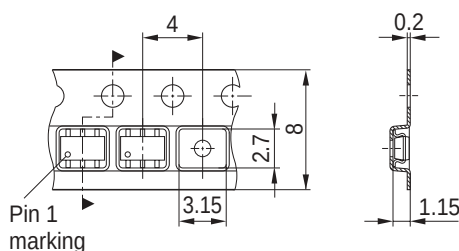
Small variations in positioning of
Date code, Type code and Manufacture are possible.



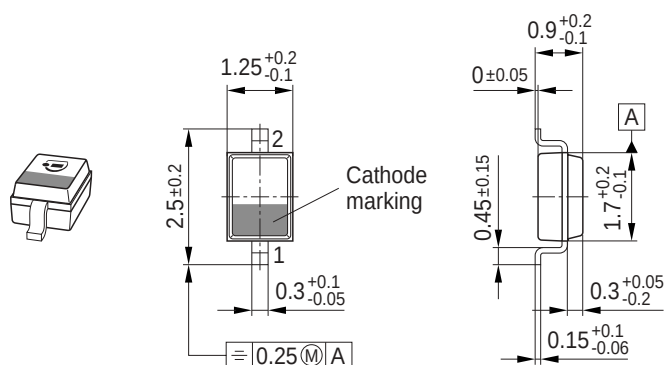
Standard Packing

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

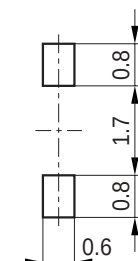
For symmetric types no defined Pin 1 orientation in reel.



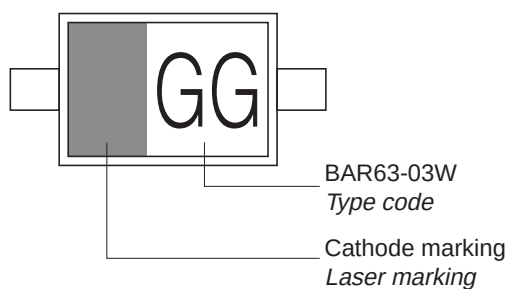
Package Outline



Foot Print

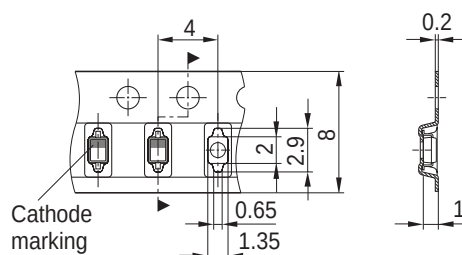


Marking Layout (Example)

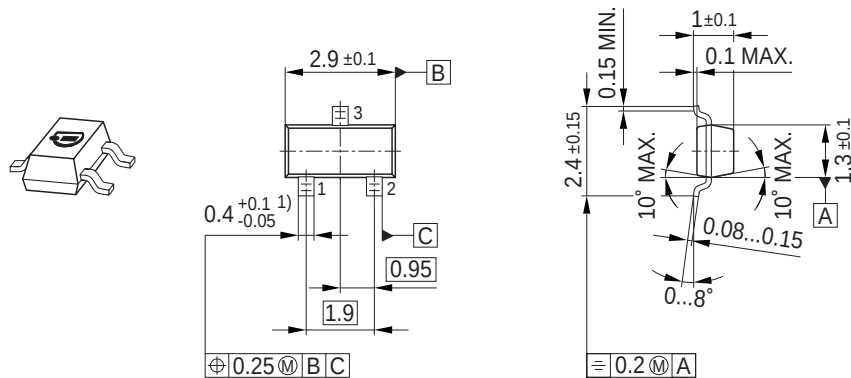


Standard Packing

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

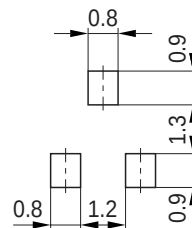


Package Outline

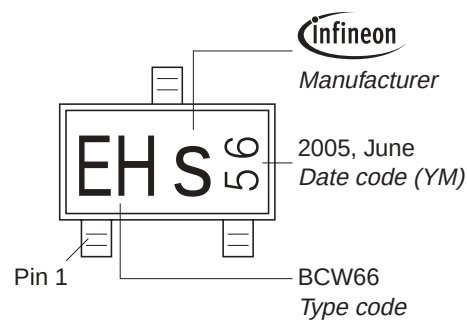


1) Lead width can be 0.6 max. in dambar area

Foot Print

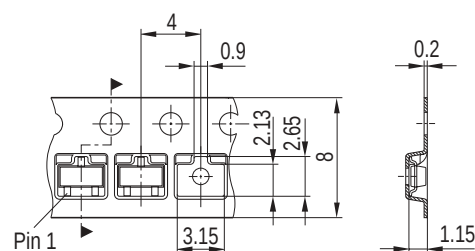


Marking Layout (Example)



Standard Packing

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



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