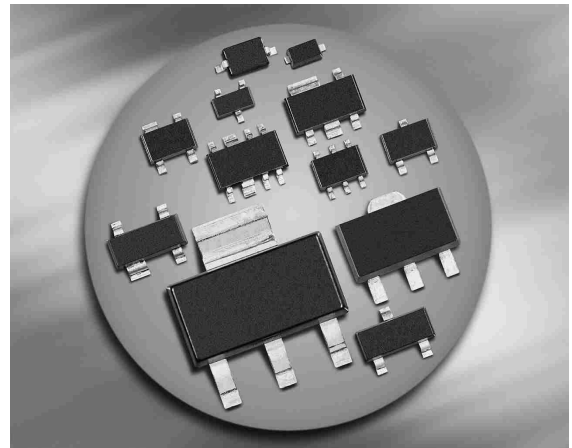
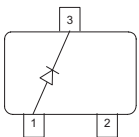
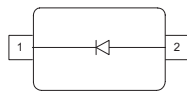
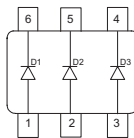


**Silicon Switching Diode**

- For high-speed switching applications
- High breakdown voltage


**BAS21**

**BAS21-03W**

**BAS21U**


Type	Package	Configuration	Marking
BAS21	SOT23	single	JSs
BAS21U	SC74	parallel triple	JSs
BAS21-03W	SOD323	single	D

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	$V_R$	200	V
Peak reverse voltage	$V_{RM}$	250	
Forward current	$I_F$	250	mA
Peak forward current	$I_{FM}$	625	
Surge forward current, $t = 10 \mu\text{s}$	$I_{FS}$	4	A
Total power dissipation	$P_{tot}$		mW
BAS21, $T_S \leq 70^\circ\text{C}$		350	
BAS21-03W, $T_S \leq 124^\circ\text{C}$		250	
BAS21U, $T_S \leq 122^\circ\text{C}$		250	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-65 ... 150	

**Thermal Resistance**

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

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

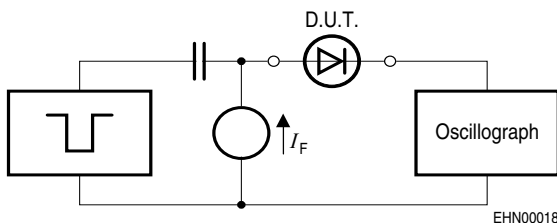
Parameter	Symbol	Values			Unit
		min.	typ.	max.	

**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	$\mu\text{A}$
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

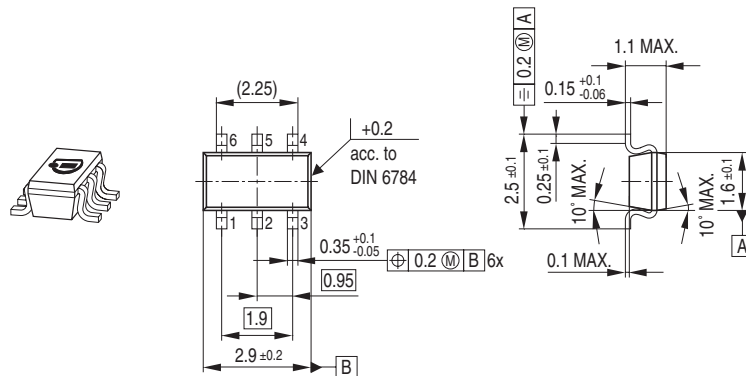
**Test circuit for reverse recovery time**


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

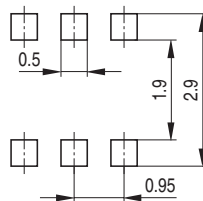
Oscilloscope:  $R = 50 \Omega$ ,  $t_r = 0.35 \text{ ns}$ ,  $C \leq 1 \text{ pF}$

<sup>1</sup>For calculation of  $R_{thJA}$  please refer to Application Note Thermal Resistance

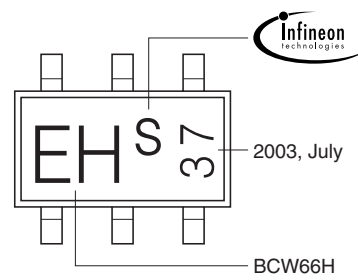
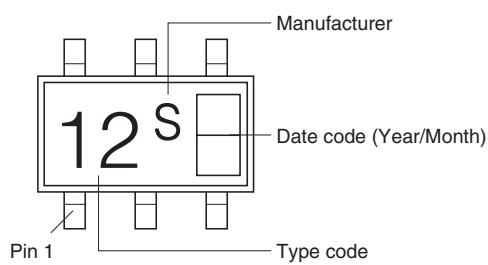
### Package Outline



### Foot Print



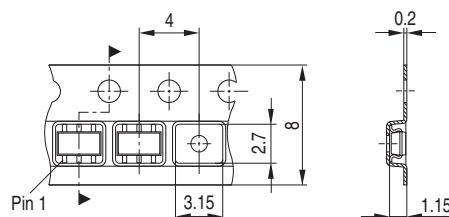
### Marking Layout



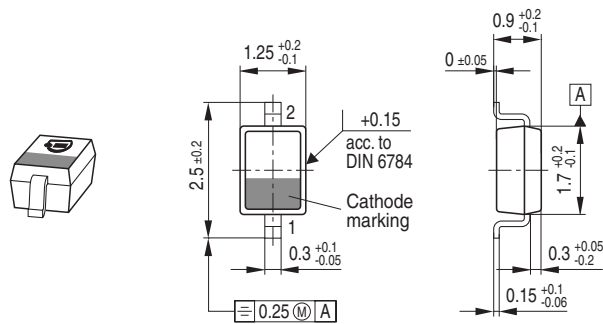
Example

### Packing

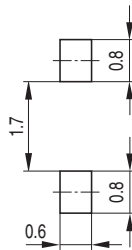
Code E6327: Reel ø180 mm = 3.000 Pieces/Reel  
 Code E6433: Reel ø330 mm = 10.000 Pieces/Reel



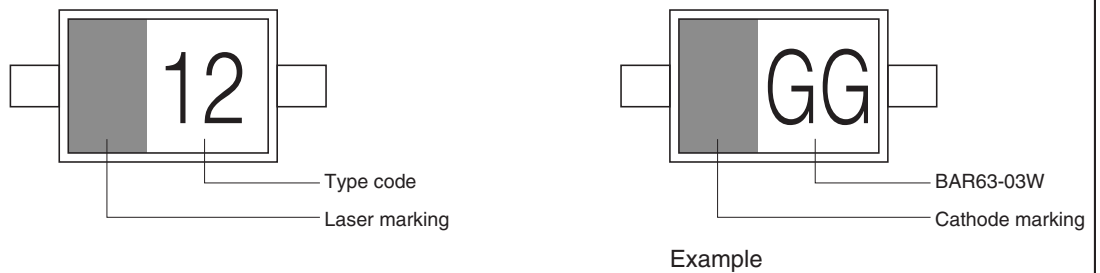
### Package Outline



### Foot Print

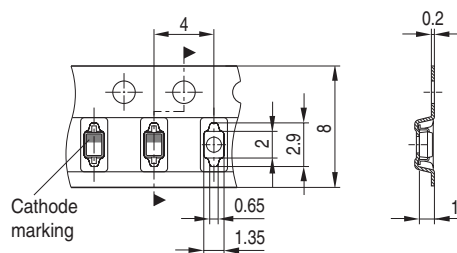


### Marking Layout

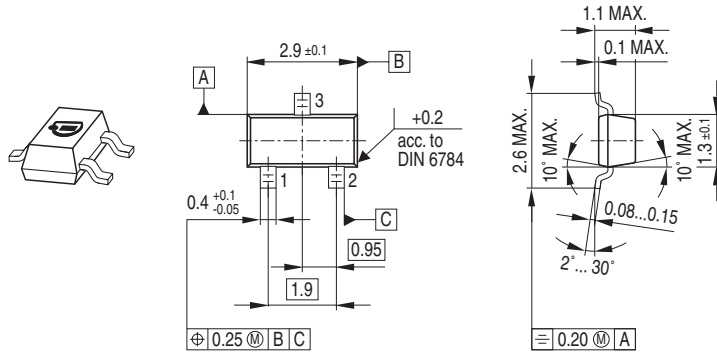


### Packing

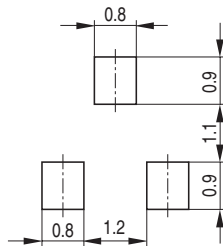
Code E6327: Reel  $\varnothing 180$  mm = 3.000 Pieces/Reel  
 Code E6433: Reel  $\varnothing 330$  mm = 10.000 Pieces/Reel



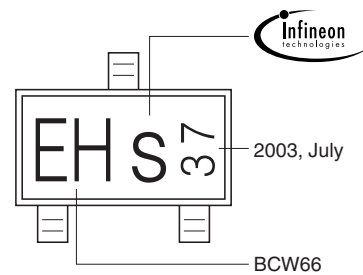
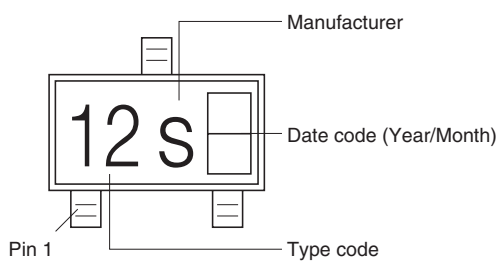
### Package Outline



### Foot Print



### Marking Layout



Example

### Packing

Code E6327: Reel  $\varnothing$ 180 mm = 3.000 Pieces/Reel

Code E6433: Reel  $\varnothing$ 330 mm = 10.000 Pieces/Reel

