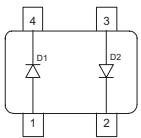
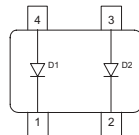
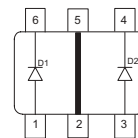
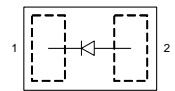
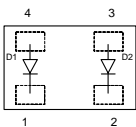


**Silicon Schottky Diode**

- Low barrier diode for detectors up to GHz frequencies
- Pb-free (RoHS compliant) package <sup>1)</sup>
- Qualified according AEC Q101


**BAT62**

**BAT62-02W  
BAT62-03W**

**BAT62-07W**

**BAT62-09S**

**BAT62-02L  
BAT62-02LS**

**BAT62-07L4**


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

Type	Package	Configuration	$L_S$ (nH)	Marking
BAT62	SOT143	anti-parallel pair	2	62s
BAT62-02L	TSLP-2-1	single, leadless	0.4	L
BAT62-02LS*	TSSLP-2-1	single, leadless	0.2	U
BAT62-02W	SCD80	single	0.6	62
BAT62-03W	SOD323	single	1.8	L
BAT62-07L4	TSLP-4-4	parallel pair, leadless	0.4	62
BAT62-07W	SOT343	parallel pair	1.8	62s
BAT62-09S	SOT363	parallel pair, high isolation	1.6	69s

\* Preliminary Data

<sup>1</sup>Pb-containing package may be available upon special request

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	$V_R$	40	V
Forward current	$I_F$	20	mA
Total power dissipation BAT62, $T_S \leq 85^\circ\text{C}$ BAT62-02L, -07L4, -03W, $T_S \leq 108^\circ\text{C}$ BAT62-02W, $T_S \leq 109^\circ\text{C}$ BAT62-07W, $T_S \leq 103^\circ\text{C}$ BAT62-09S, $T_S \leq 105^\circ\text{C}$	$P_{\text{tot}}$	100 100 100 100 100	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{\text{stg}}$	-55 ... 150	

**Thermal Resistance**

Parameter	Symbol	Value	Unit
Junction - soldering point <sup>1)</sup> BAT62 BAT62-02L, -07L4, -03W BAT62-02W BAT62-07W BAT62-09S	$R_{\text{thJS}}$	$\leq 650$ $\leq 420$ $\leq 410$ $\leq 470$ $\leq \text{tbd}$	K/W

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Reverse current $V_R = 40\text{ V}$	$I_R$	-	-	10	$\mu\text{A}$
Forward voltage $I_F = 2\text{ mA}$	$V_F$	-	0.58	1	V
Forward voltage matching <sup>2)</sup> $I_F = 2\text{ mA}$	$\Delta V_F$	-	-	20	mV

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

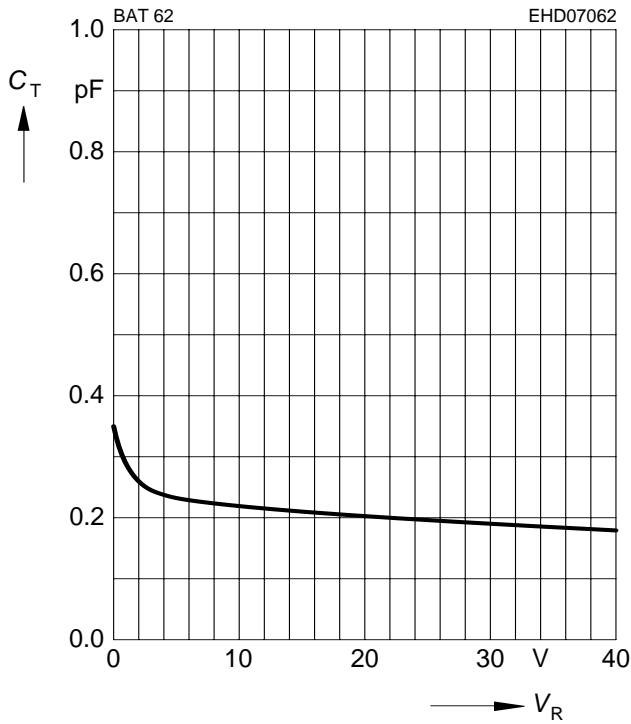
<sup>2)</sup> $\Delta V_F$  is the difference between lowest and highest  $V_F$  in a multiple diode component.

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>AC Characteristics</b>					
Diode capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_T$	-	0.35	0.6	pF
Differential resistance $V_R = 0\text{ V}, f = 10\text{ kHz}$	$R_0$	-	225	-	k $\Omega$

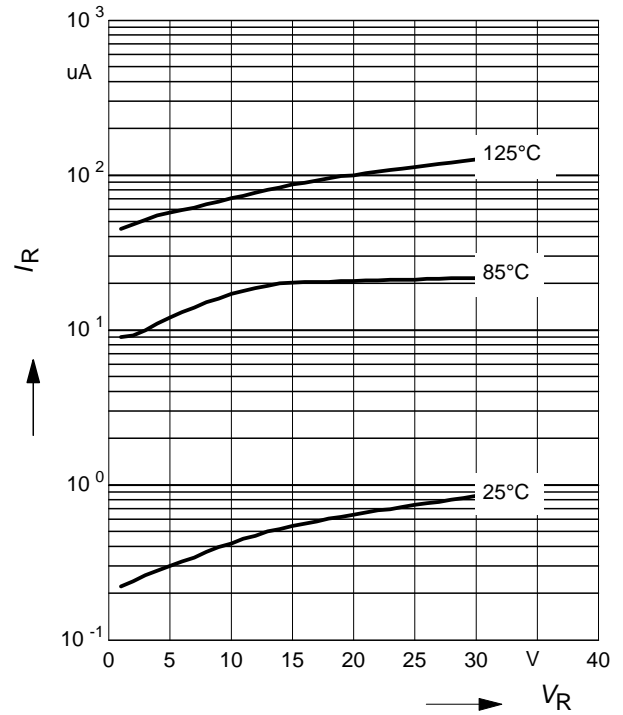
**Diode capacitance  $C_T = f(V_R)$**

$f = 1\text{MHz}$



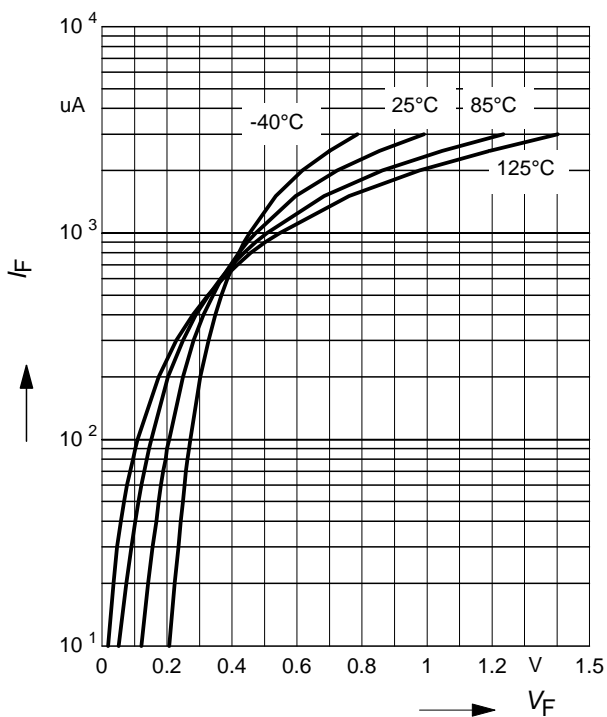
**Reverse current  $I_R = f(V_R)$**

$T_A = \text{Parameter}$



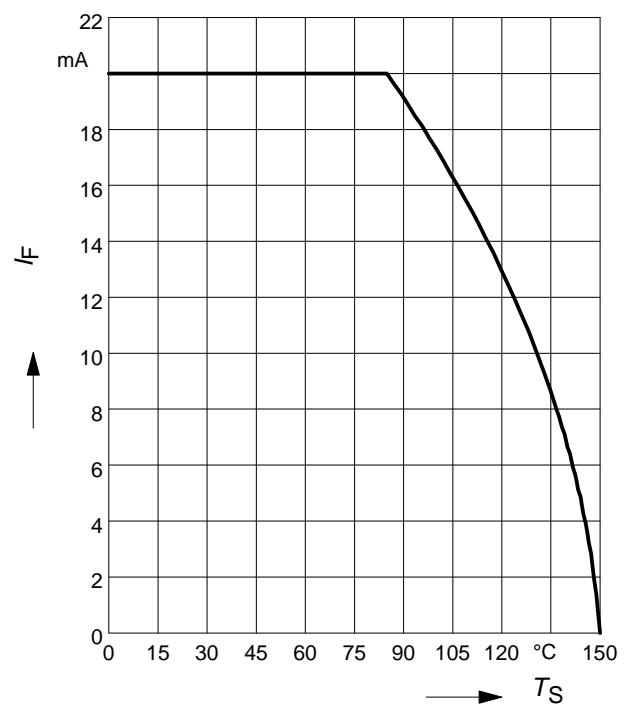
**Forward current  $I_F = f(V_F)$**

$T_A = \text{Parameter}$



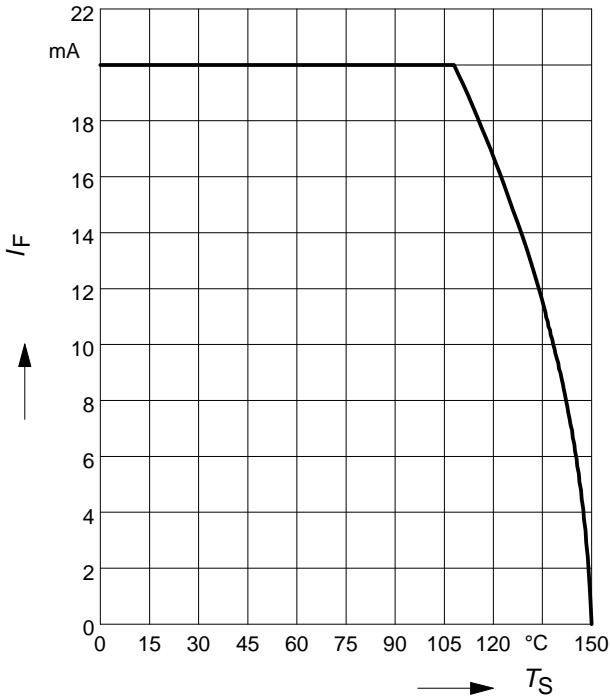
**Forward current  $I_F = f(T_S)$**

BAT62



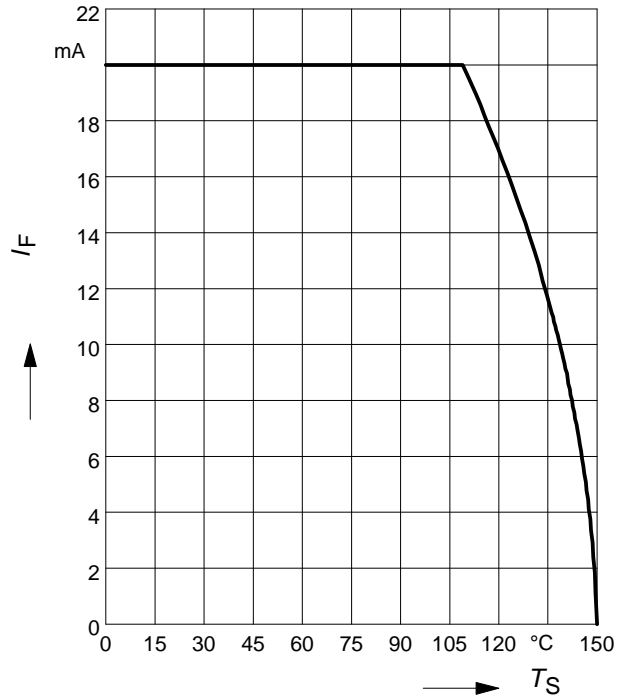
Forward current  $I_F = f(T_S)$

BAT62-02L, -07L4



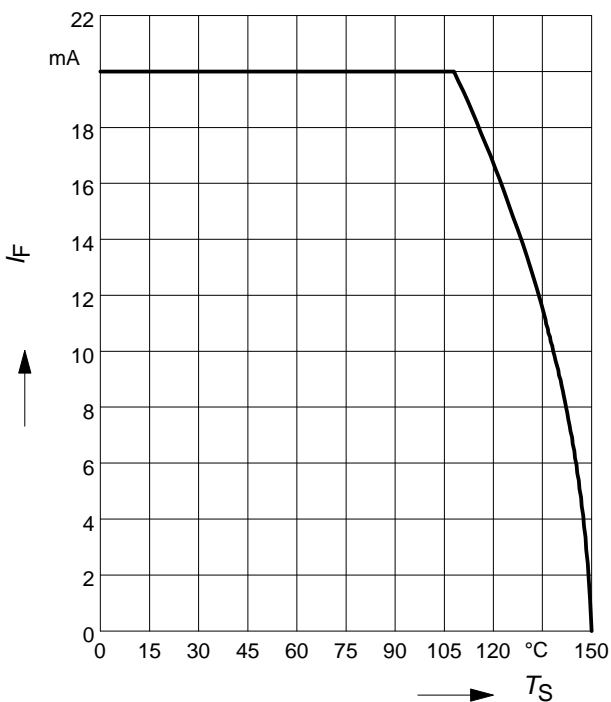
Forward current  $I_F = f(T_S)$

BAT62-02W



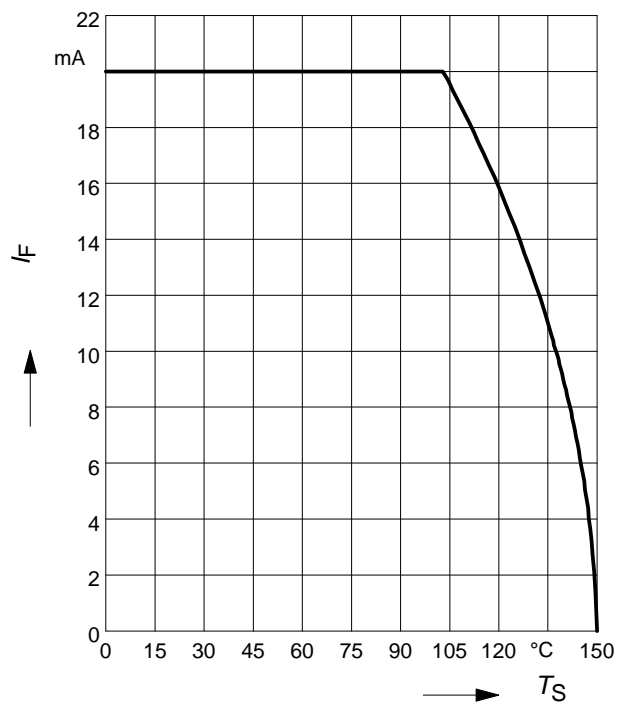
Forward current  $I_F = f(T_S)$

BAT62-03W



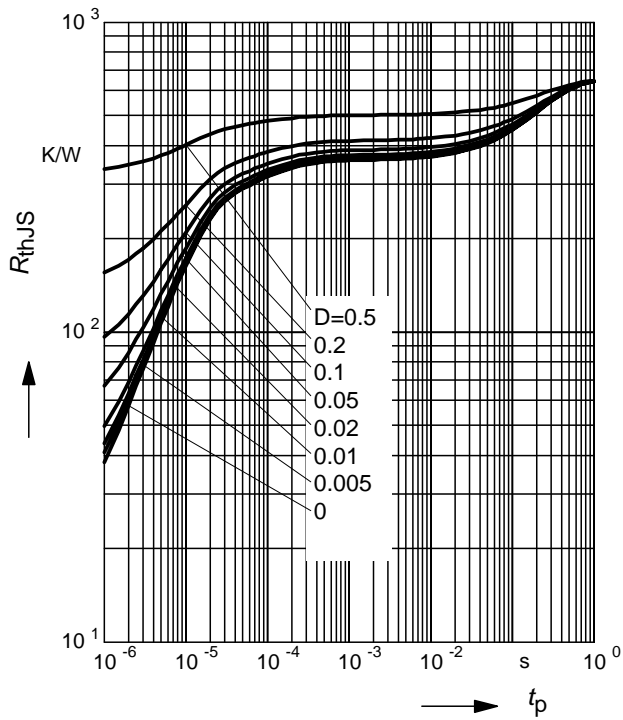
Forward current  $I_F = f(T_S)$

BAT62-07W



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

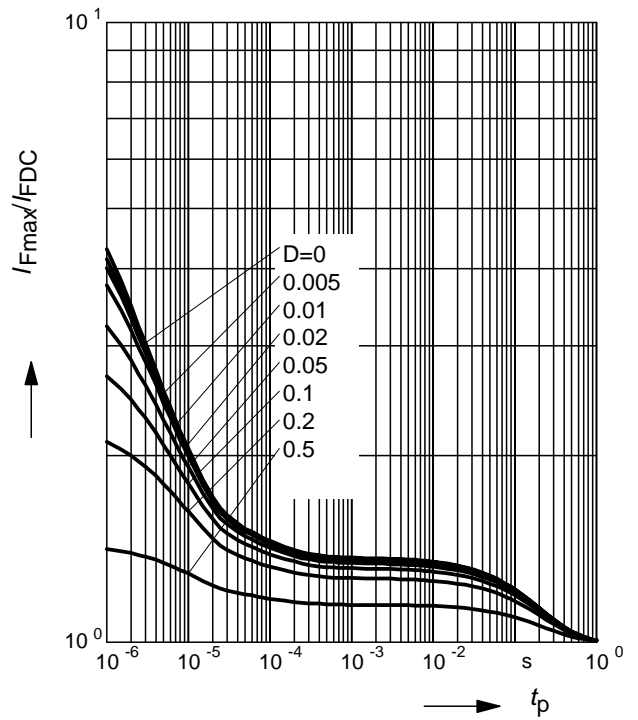
BAT62



**Permissible Pulse Load**

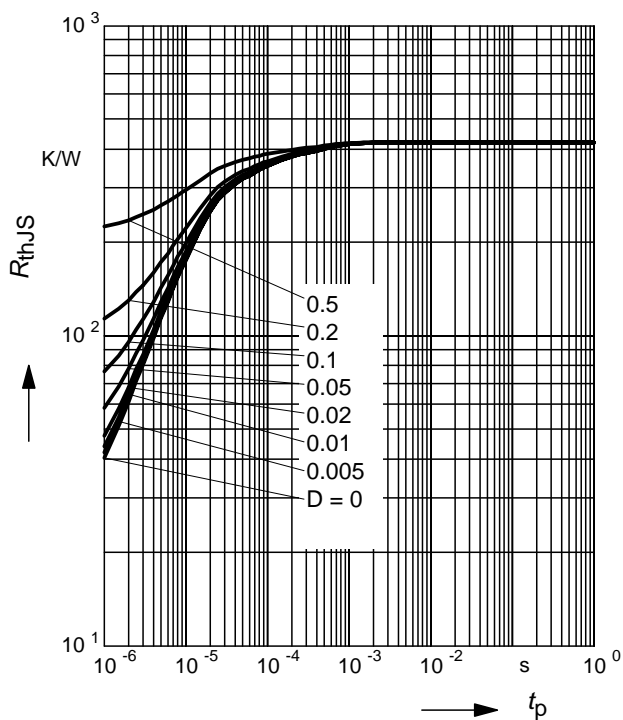
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62



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

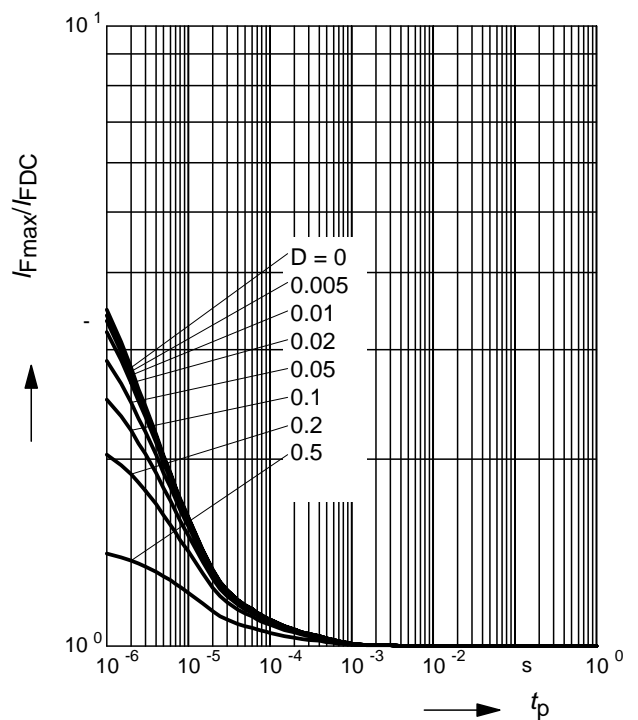
BAT62-02L, -07L4



**Permissible Pulse Load**

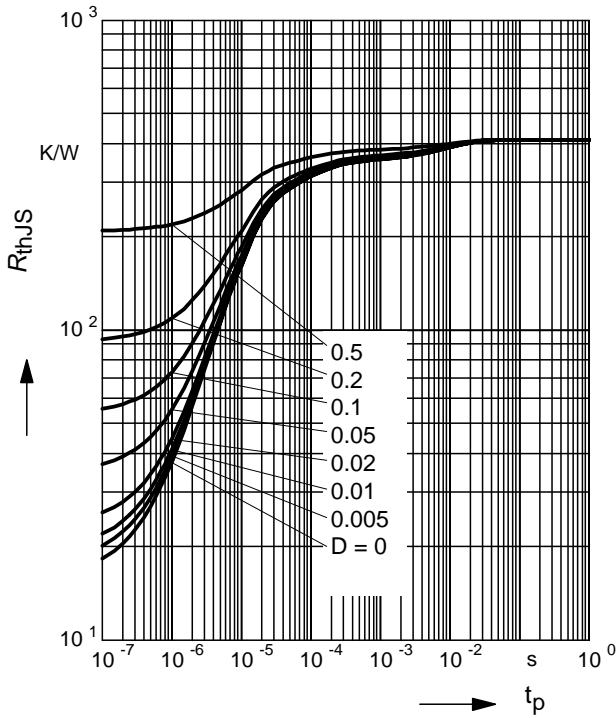
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-02L, -07L4



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

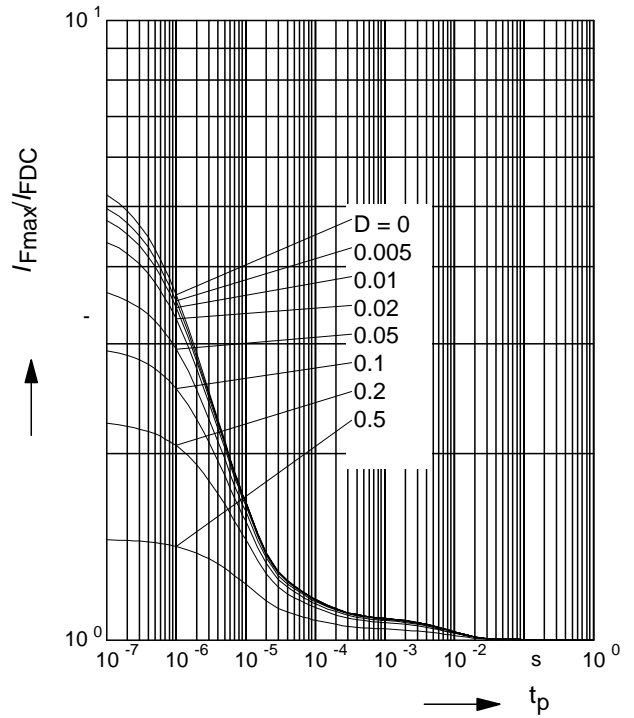
BAT62-02W



**Permissible Pulse Load**

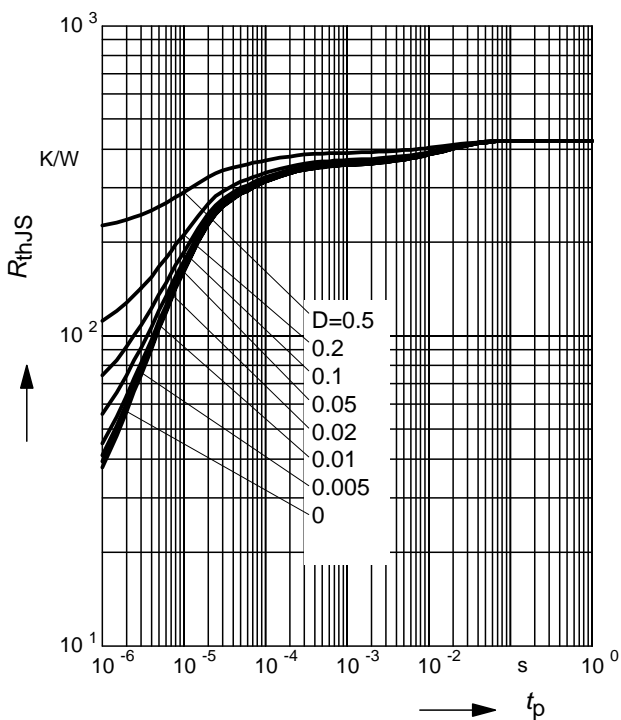
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-02W



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

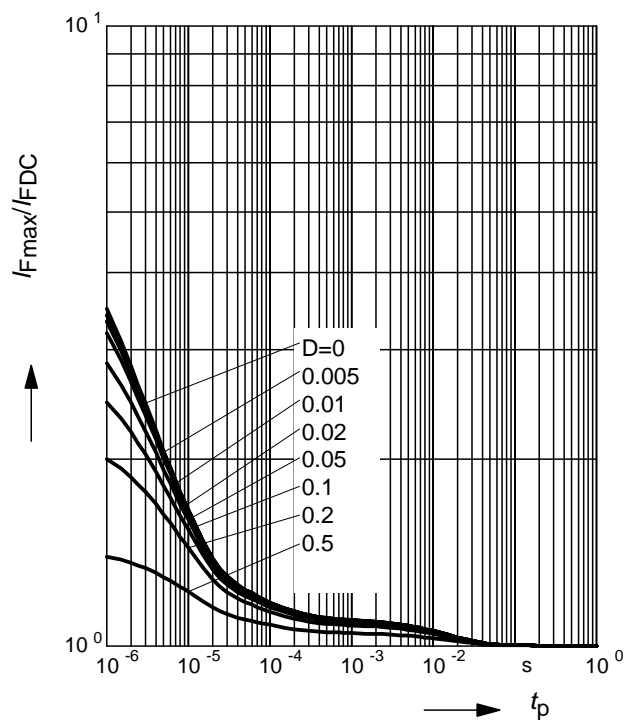
BAT62-03W



**Permissible Pulse Load**

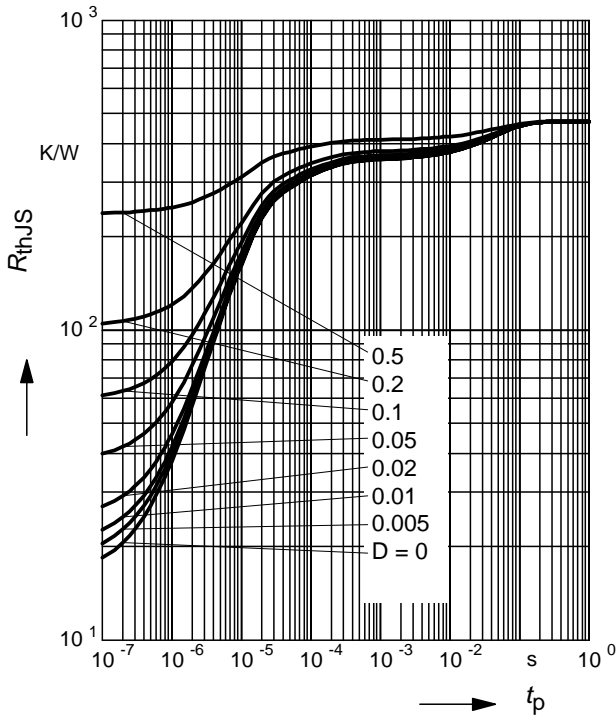
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-03W



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

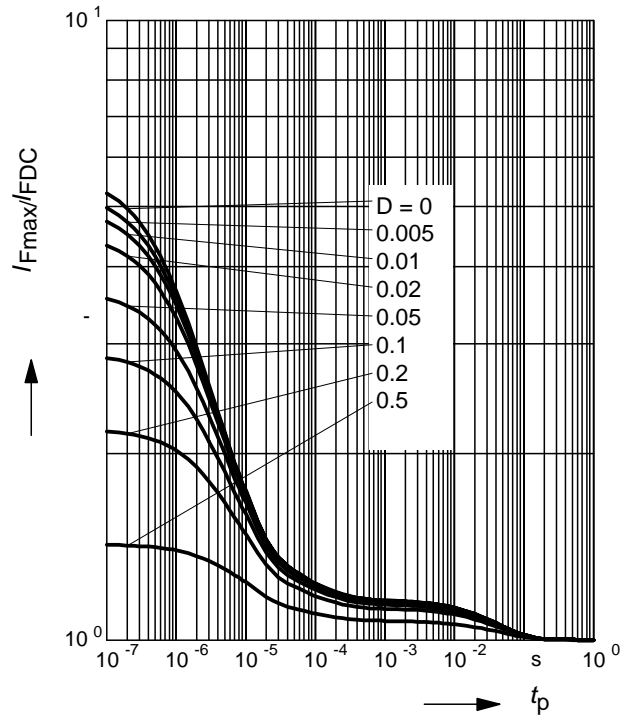
BAT62-07W



**Permissible Pulse Load**

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

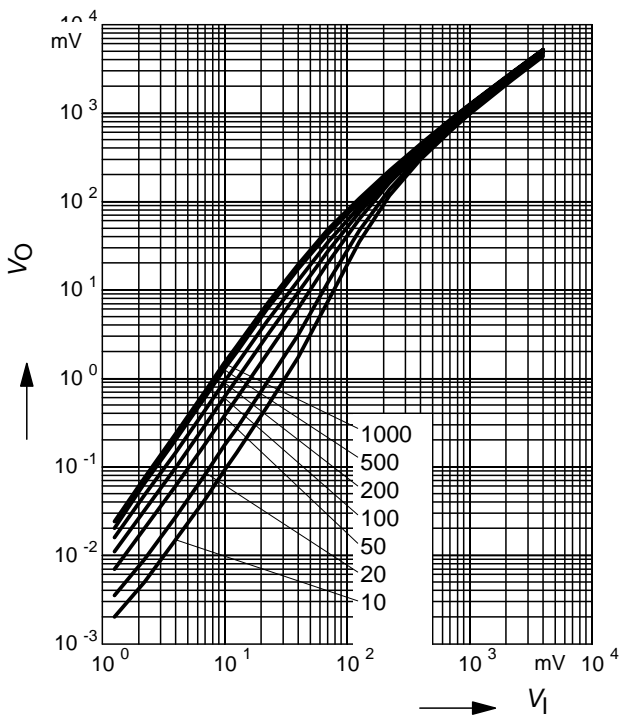
BAT62-07W



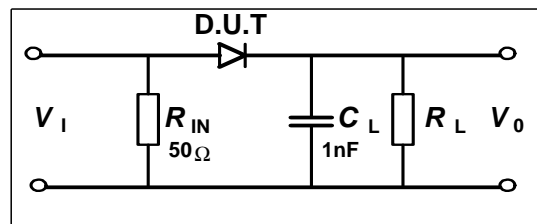
**Rectifier voltage  $V_{out} = f(V_{in})$**

$f = 900\text{MHz}$

$R_L = \text{Parameter in } k\Omega$

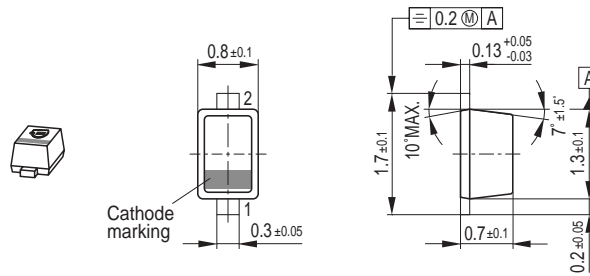


**Testcircuit**

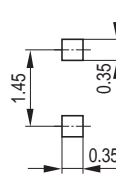




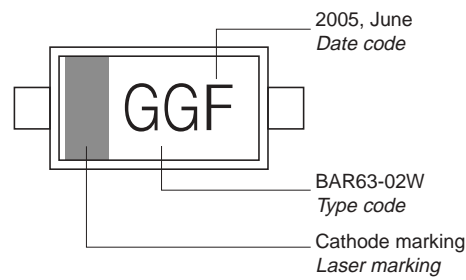
Package Outline



Foot Print

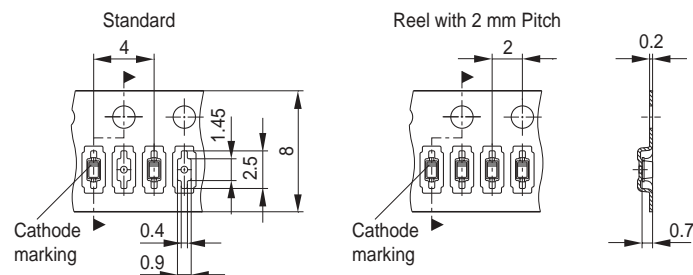


Marking Layout (Example)



Standard Packing

Reel  $\varnothing$ 180 mm = 3.000 Pieces/Reel  
 Reel  $\varnothing$ 180 mm = 8.000 Pieces/Reel (2 mm Pitch)  
 Reel  $\varnothing$ 330 mm = 10.000 Pieces/Reel

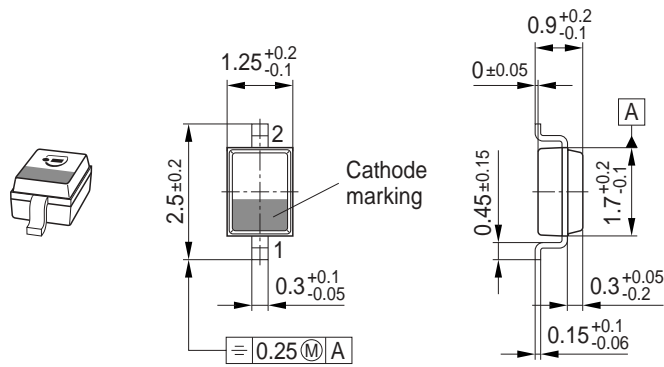


Date Code marking for discrete packages with one digit (SCD80, SC79, SC75<sup>1)</sup>) CES-Code

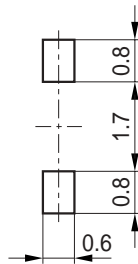
Month	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
01	a	p	A	P	a	p	A	P	a	p	A	P
02	b	q	B	Q	b	q	B	Q	b	q	B	Q
03	c	r	C	R	c	r	C	R	c	r	C	R
04	d	s	D	S	d	s	D	S	d	s	D	S
05	e	t	E	T	e	t	E	T	e	t	E	T
06	f	u	F	U	f	u	F	U	f	u	F	U
07	g	v	G	V	g	v	G	V	g	v	G	V
08	h	x	H	X	h	x	H	X	h	x	H	X
09	j	y	J	Y	j	y	J	Y	j	y	J	Y
10	k	z	K	Z	k	z	K	Z	k	z	K	Z
11	l	2	L	4	l	2	L	4	l	2	L	4
12	n	3	N	5	n	3	N	5	n	3	N	5

1) New Marking Layout for SC75, implemented at October 2005.

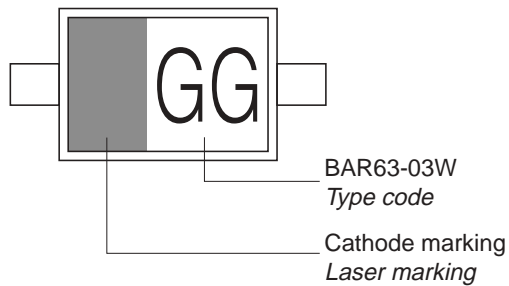
Package Outline



Foot Print

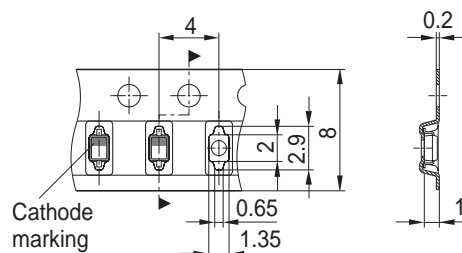


Marking Layout (Example)

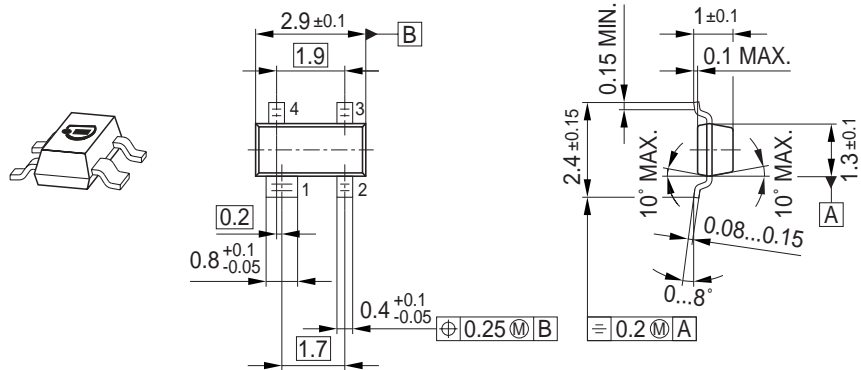


Standard Packing

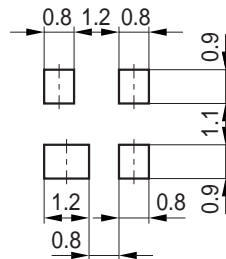
Reel  $\varnothing$ 180 mm = 3.000 Pieces/Reel  
 Reel  $\varnothing$ 330 mm = 10.000 Pieces/Reel



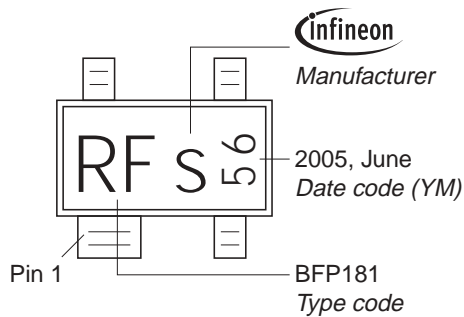
Package Outline



Foot Print

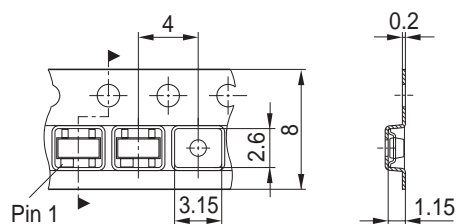


Marking Layout (Example)

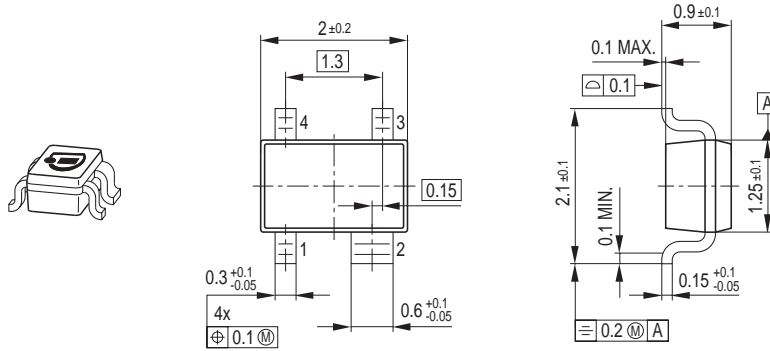


Standard Packing

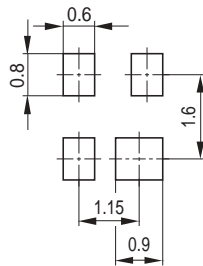
Reel  $\varnothing 180 \text{ mm} = 3.000 \text{ Pieces/Reel}$   
 Reel  $\varnothing 330 \text{ mm} = 10.000 \text{ Pieces/Reel}$



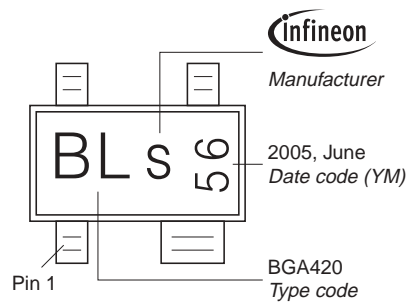
Package Outline



Foot Print

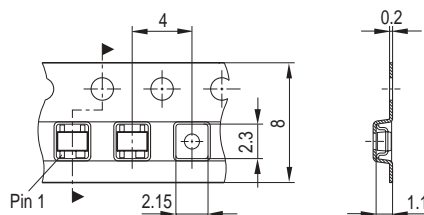


Marking Layout (Example)

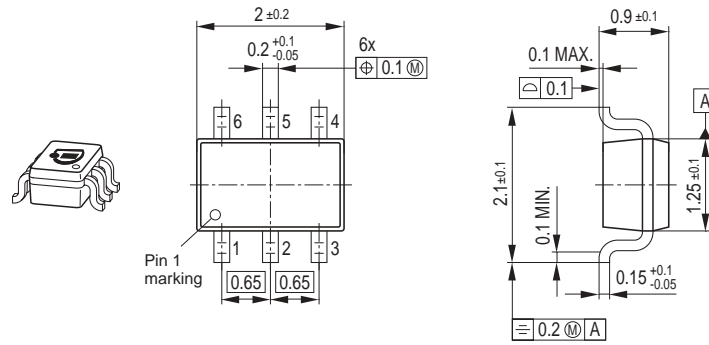


Standard Packing

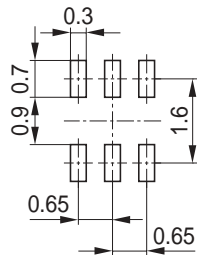
Reel  $\varnothing 180$  mm = 3.000 Pieces/Reel  
 Reel  $\varnothing 330$  mm = 10.000 Pieces/Reel



Package Outline

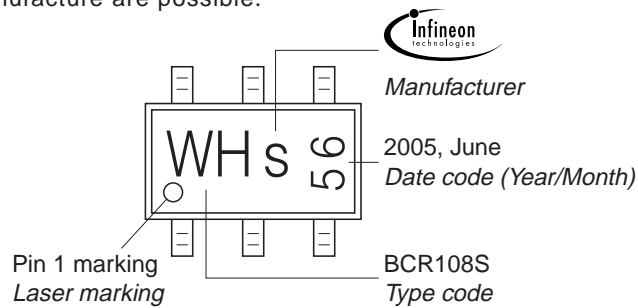


Foot Print



Marking Layout (Example)

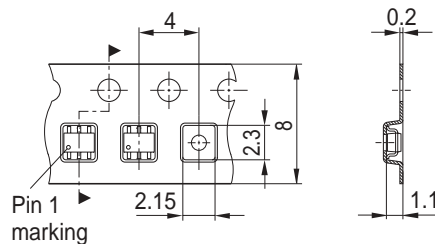
Small variations in positioning of Date code, Type code and Manufacture are possible.



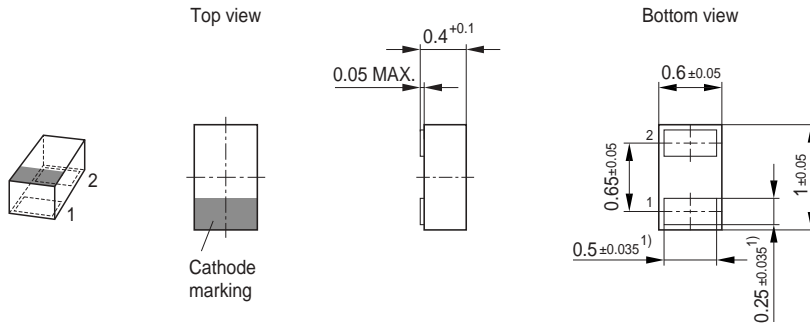
Standard Packing

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

For symmetric types no defined Pin 1 orientation in reel.



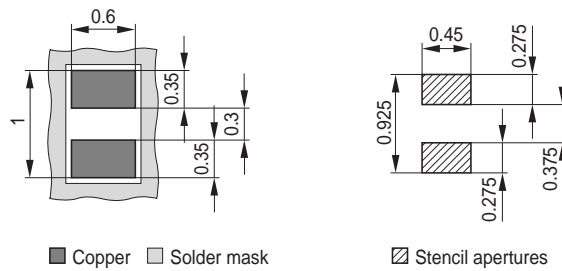
### Package Outline



1) Dimension applies to plated terminal

### Foot Print

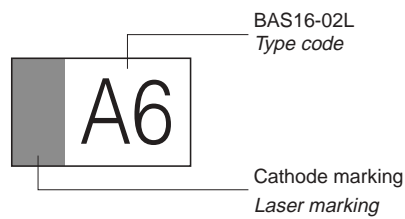
For board assembly information please refer to Infineon website "Packages"



■ Copper □ Solder mask

▨ Stencil apertures

### Marking Layout (Example)

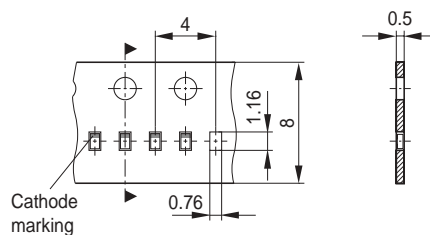


BAS16-02L  
Type code

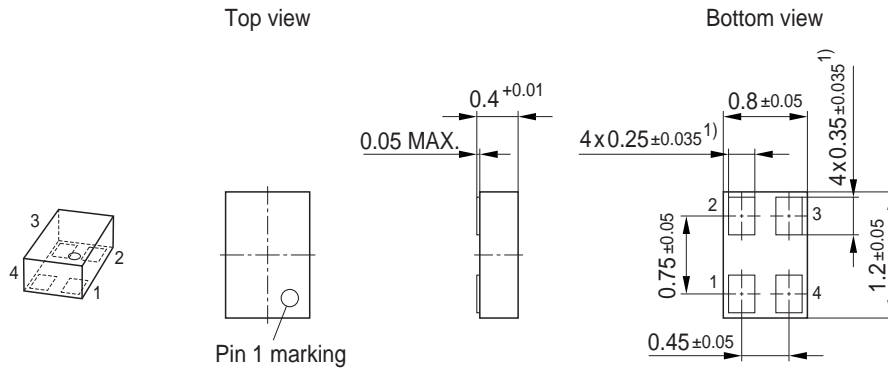
Cathode marking  
Laser marking

### Standard Packing

Reel  $\varnothing$ 180 mm = 15.000 Pieces/Reel  
Reel  $\varnothing$ 330 mm = 50.000 Pieces/Reel (optional)



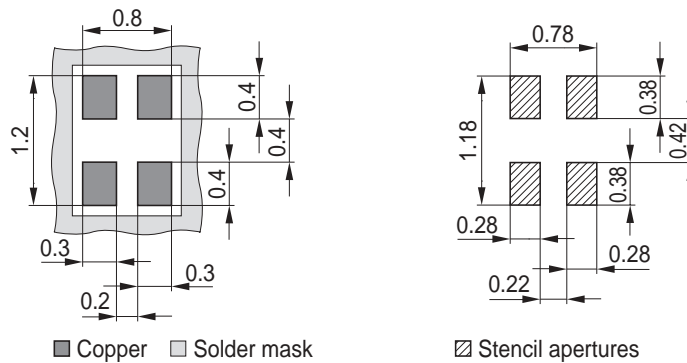
### Package Outline



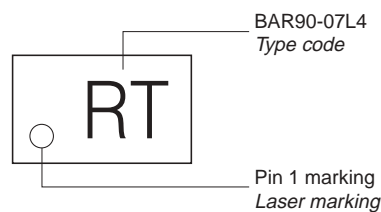
1) Dimension applies to plated terminal

### Foot Print

For board assembly information please refer to Infineon website "Packages"

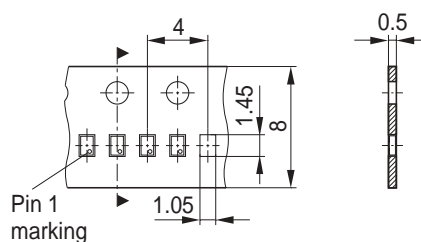


### Marking Layout (Example)



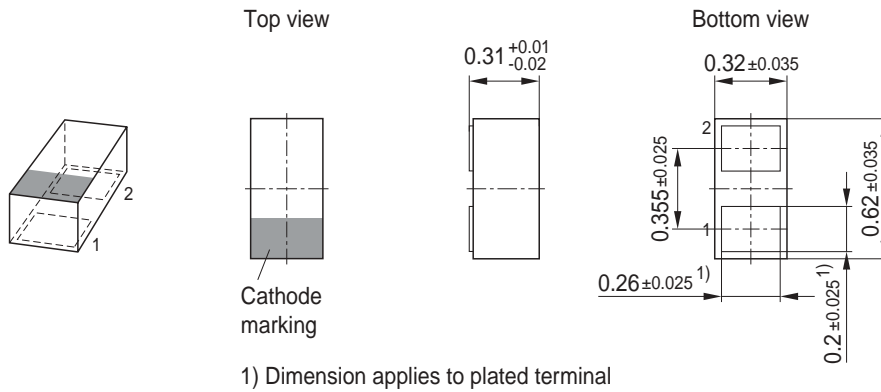
### Standard Packing

Reel  $\varnothing$ 180 mm = 15.000 Pieces/Reel



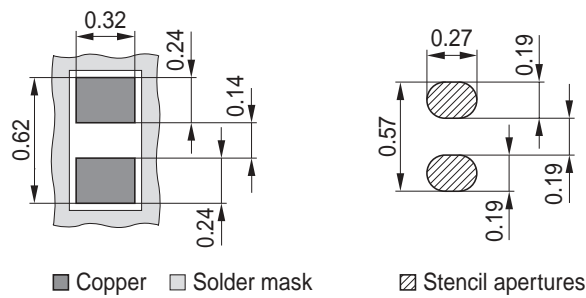


### Package Outline

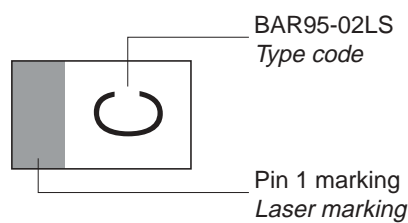


### Foot Print

For board assembly information please refer to Infineon website "Packages"

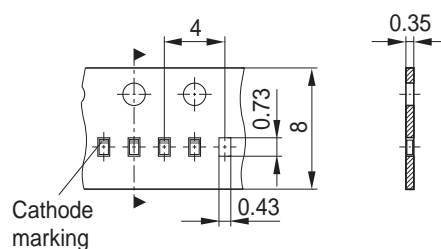


### Marking Layout



### Standard Packing

Reel ø180 mm = 15.000 Pieces/Reel



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