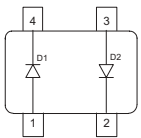
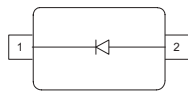
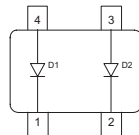
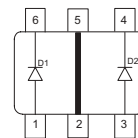
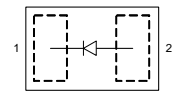
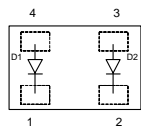


Silicon Schottky Diode

- Low barrier diode for detectors up to GHz frequencies
- Pb-free (RoHS compliant) package ¹⁾
- 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

¹⁾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_{tot}	100 100 100 100 100	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾ BAT62 BAT62-02L, -07L4, -03W BAT62-02W BAT62-07W BAT62-09S	R_{thJS}	≤ 650 ≤ 420 ≤ 410 ≤ 470 $\leq \text{td}$	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	μA
Forward voltage $I_F = 2\text{ mA}$	V_F	-	0.58	1	V
Forward voltage matching ²⁾ $I_F = 2\text{ mA}$	ΔV_F	-	-	20	mV

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

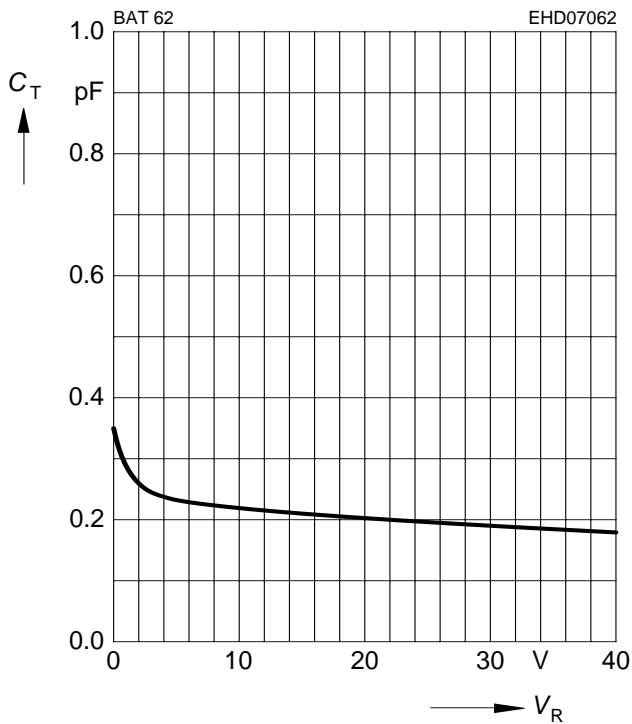
²⁾ ΔV_F is the difference between lowest and highest V_F in a multiple diode component.

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
AC Characteristics					
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 Ω

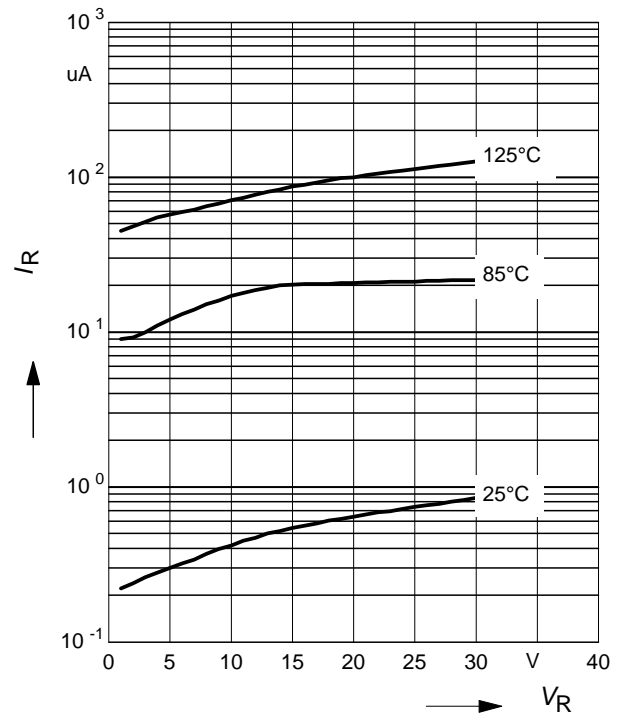
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



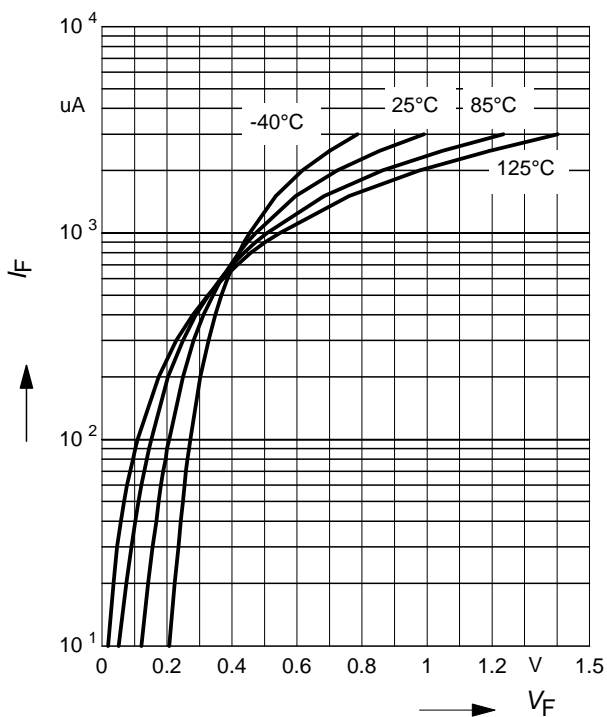
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



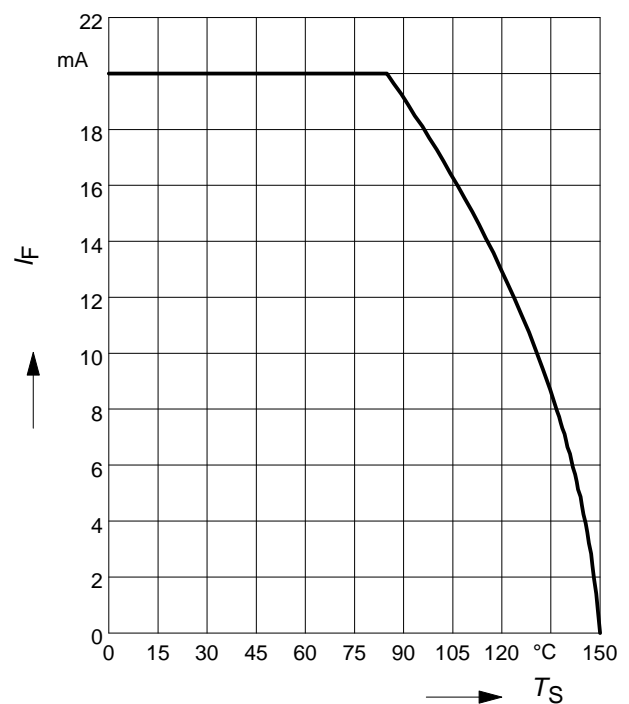
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



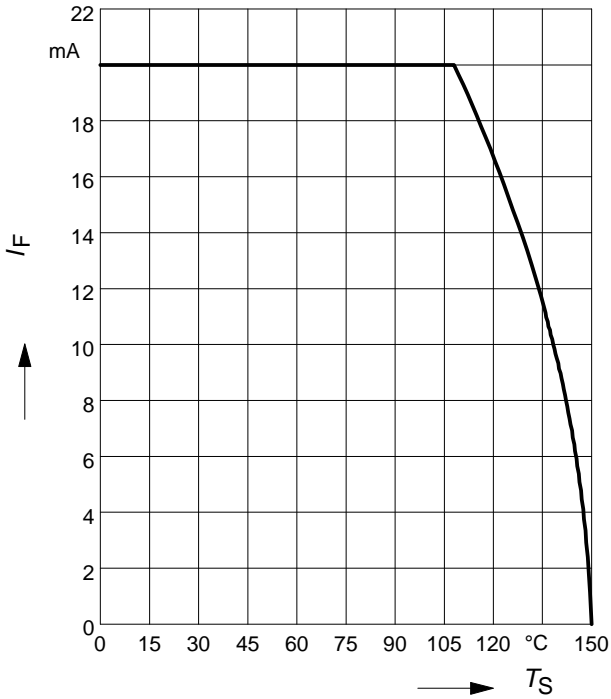
Forward current $I_F = f(T_S)$

BAT62



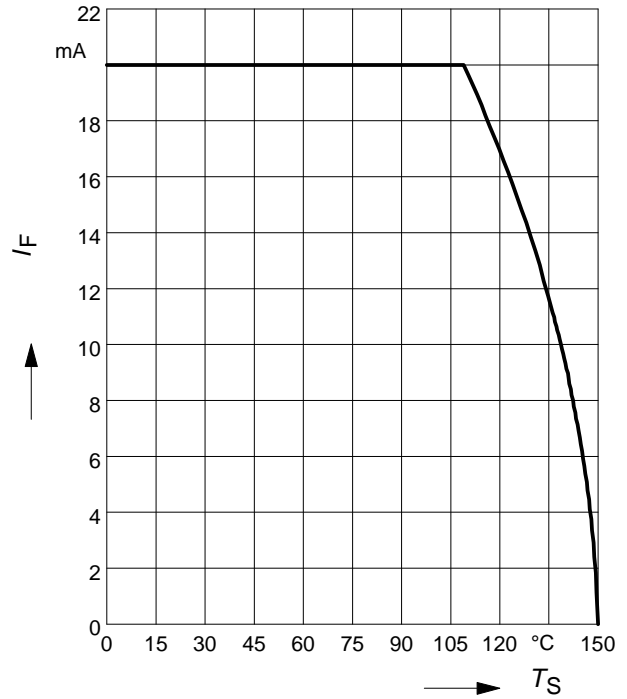
Forward current $I_F = f(T_S)$

BAT62-02L, -07L4



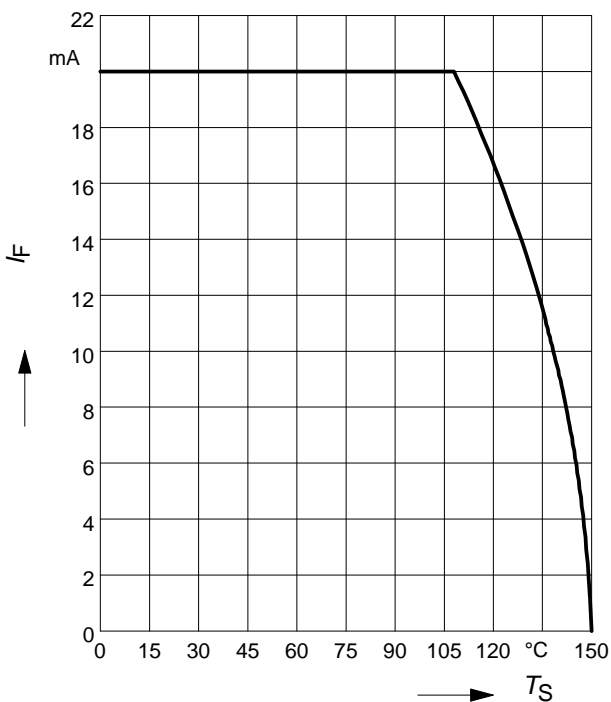
Forward current $I_F = f(T_S)$

BAT62-02W



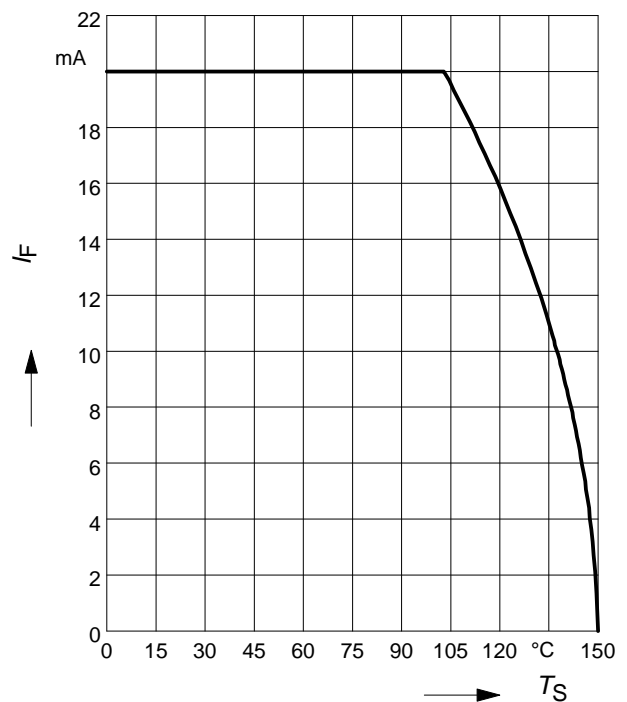
Forward current $I_F = f(T_S)$

BAT62-03W



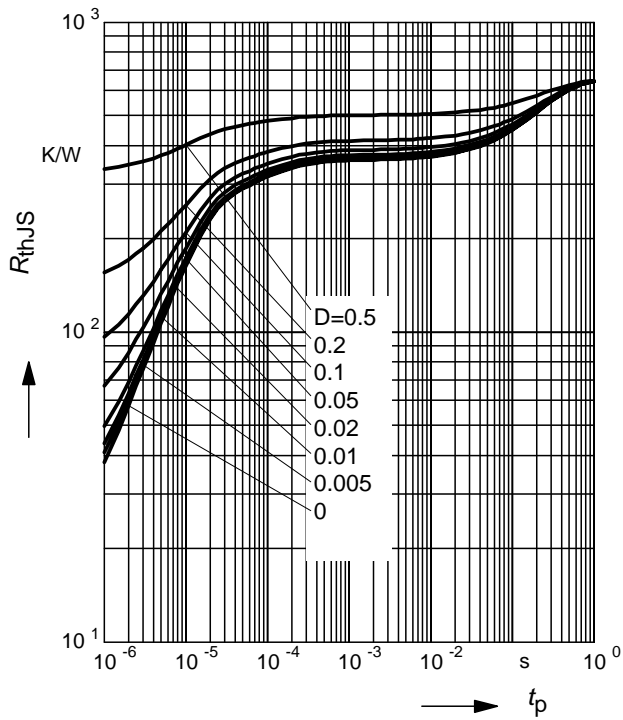
Forward current $I_F = f(T_S)$

BAT62-07W



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

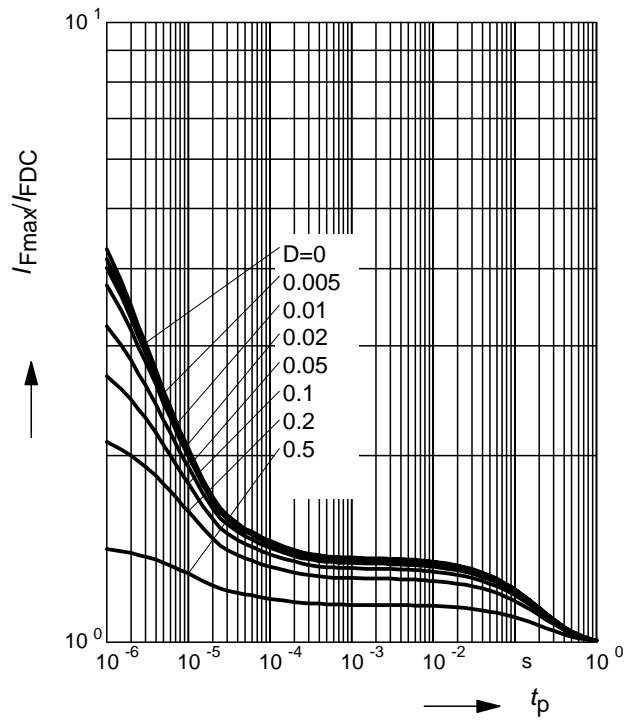
BAT62



Permissible Pulse Load

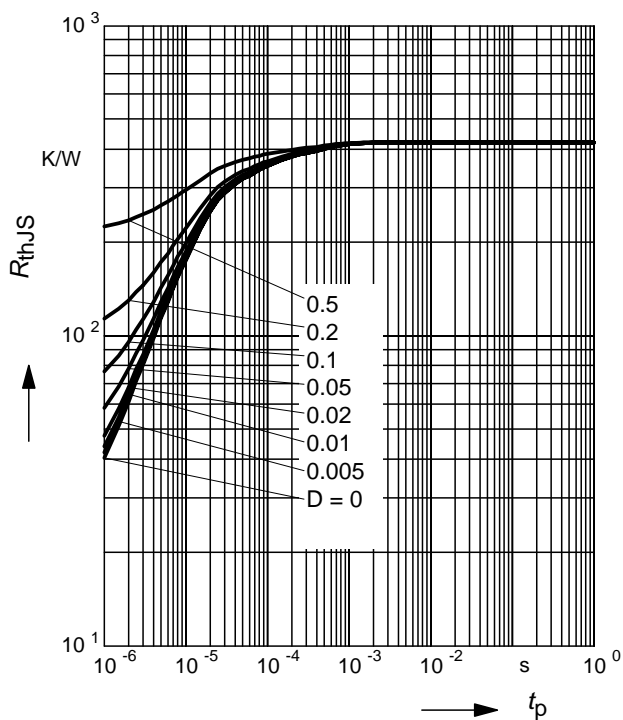
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62



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

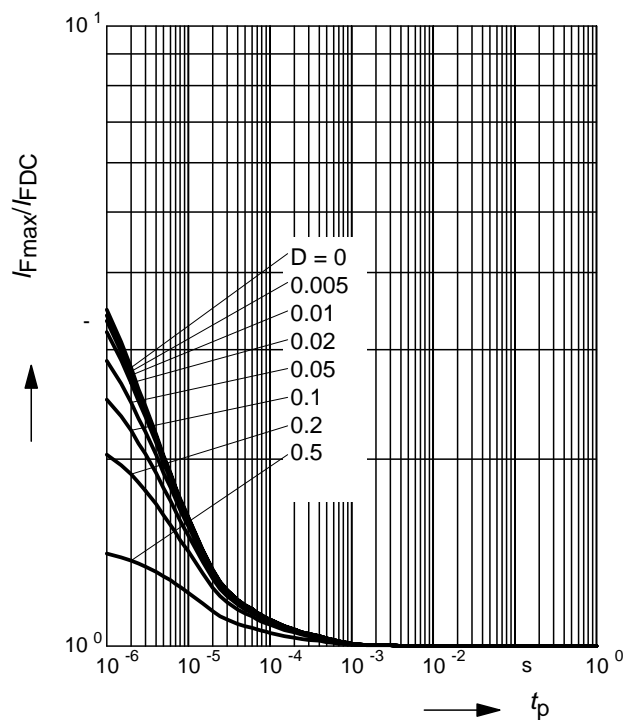
BAT62-02L, -07L4



Permissible Pulse Load

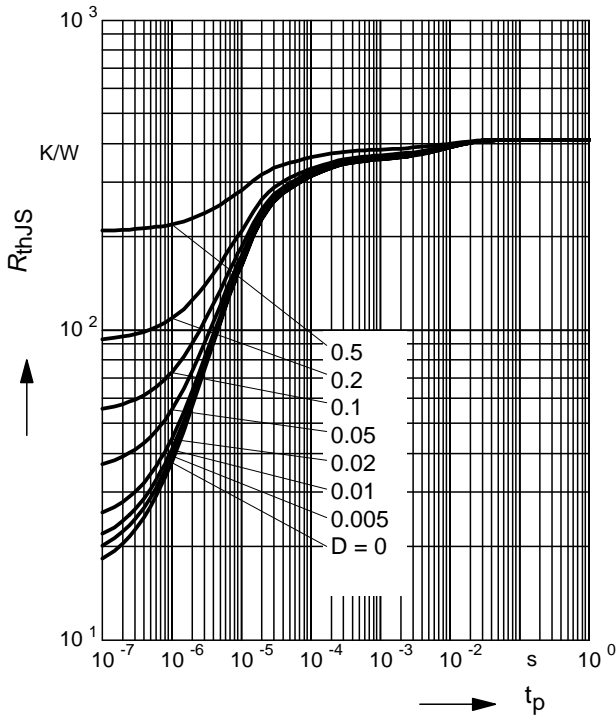
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-02L, -07L4



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

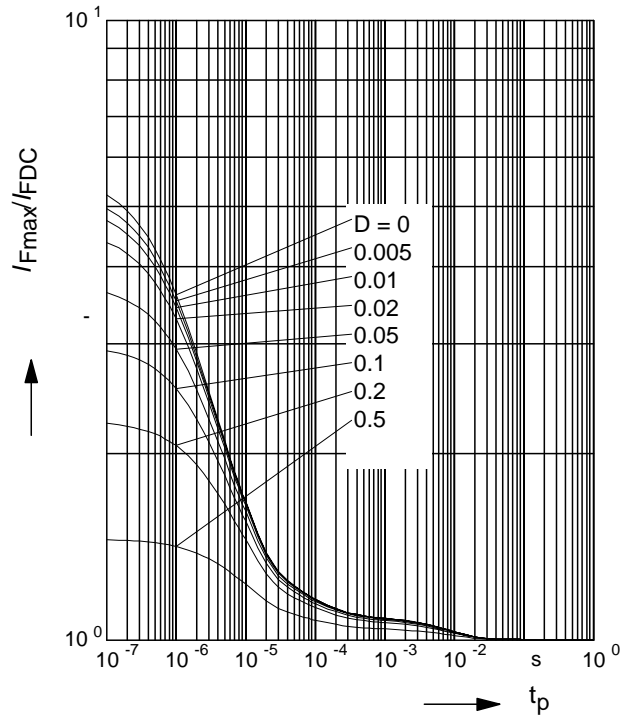
BAT62-02W



Permissible Pulse Load

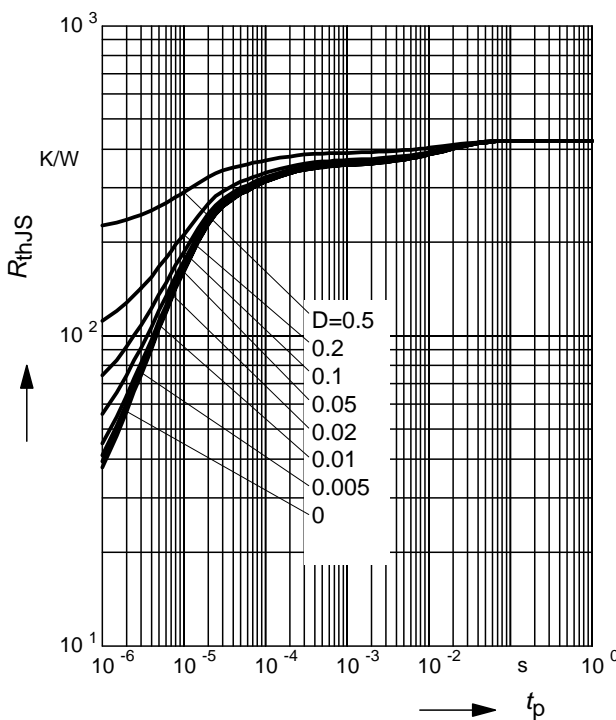
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-02W



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

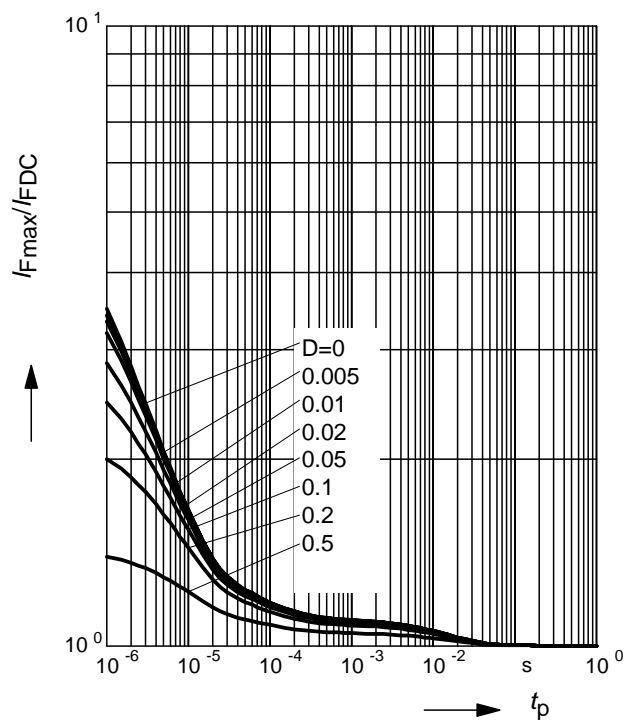
BAT62-03W



Permissible Pulse Load

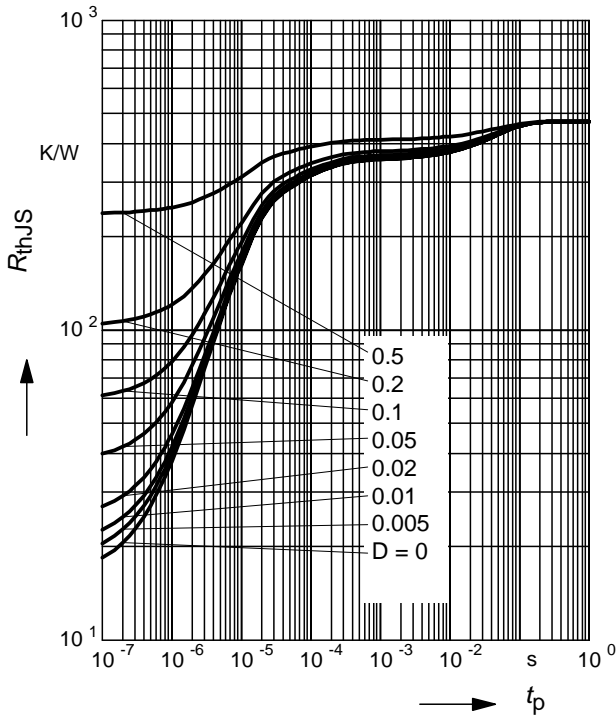
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-03W



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

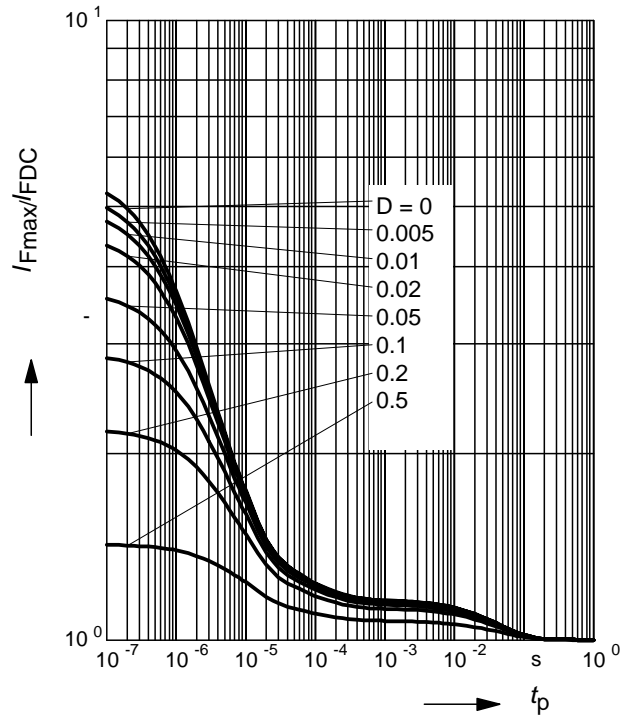
BAT62-07W



Permissible Pulse Load

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

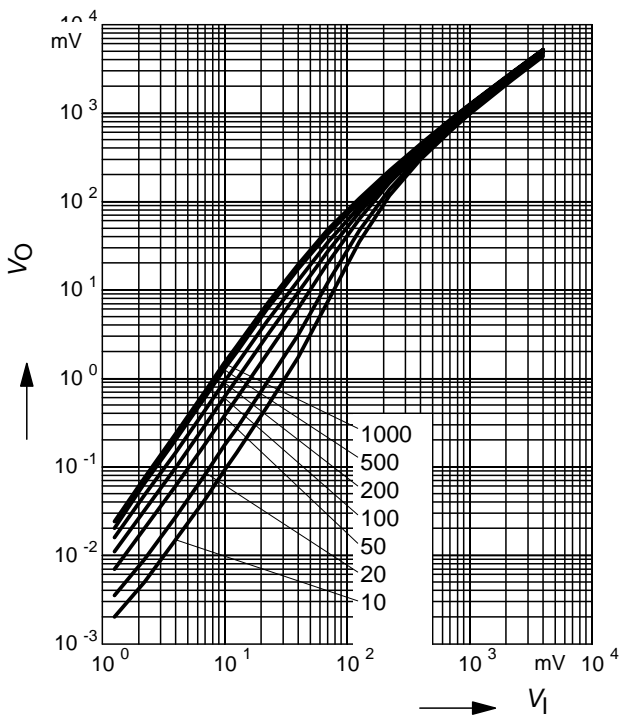
BAT62-07W



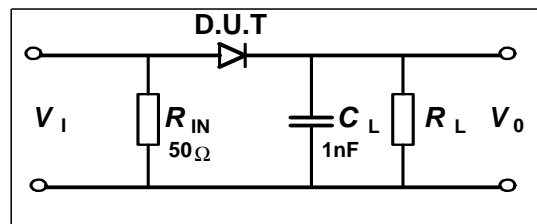
Rectifier voltage $V_{out} = f(V_{in})$

$f = 900\text{MHz}$

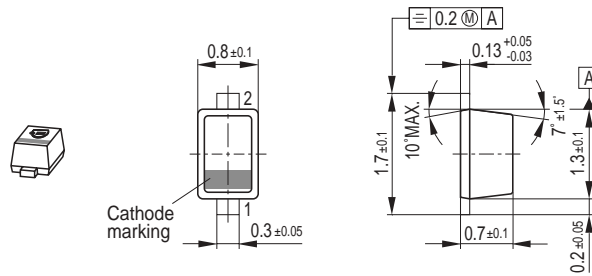
$R_L = \text{Parameter in } k\Omega$



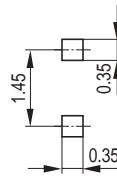
Testcircuit



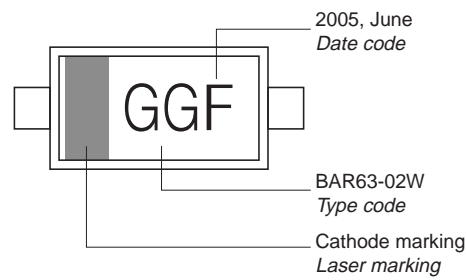
Package Outline



Foot Print

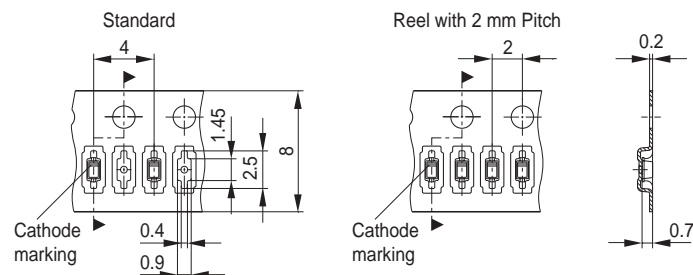


Marking Layout (Example)



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

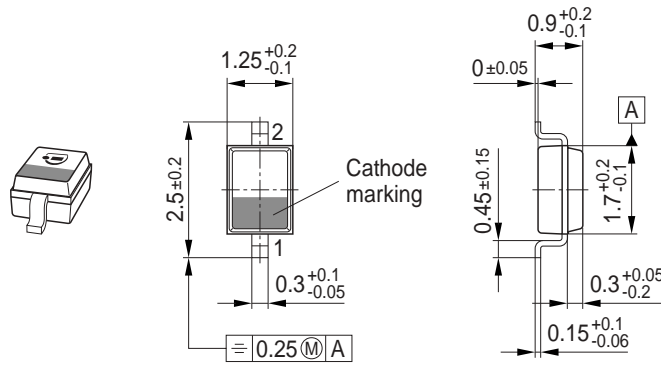


Date Code marking for discrete packages with one digit (SCD80, SC79, SC75¹⁾) CES-Code

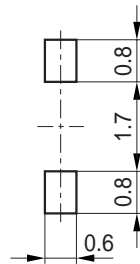
Month	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
01	a	p	A	P	a	p	A	P	a	p	A	P
02	b	q	B	Q	b	q	B	Q	b	q	B	Q
03	c	r	C	R	c	r	C	R	c	r	C	R
04	d	s	D	S	d	s	D	S	d	s	D	S
05	e	t	E	T	e	t	E	T	e	t	E	T
06	f	u	F	U	f	u	F	U	f	u	F	U
07	g	v	G	V	g	v	G	V	g	v	G	V
08	h	x	H	X	h	x	H	X	h	x	H	X
09	j	y	J	Y	j	y	J	Y	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.

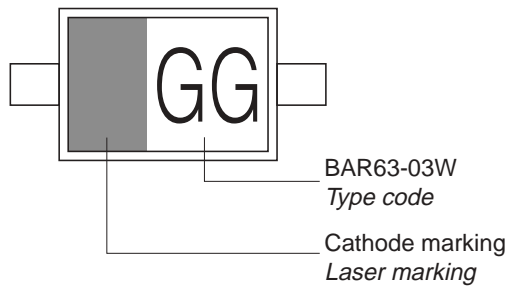
Package Outline



Foot Print

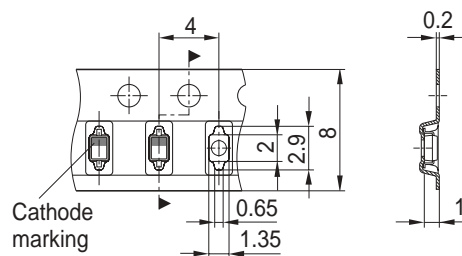


Marking Layout (Example)

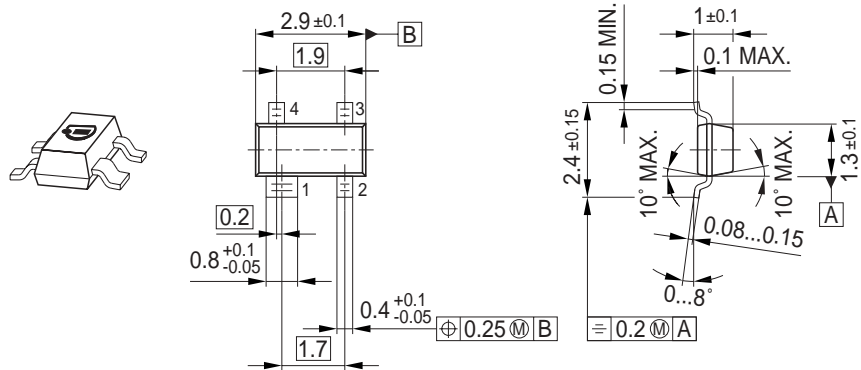


Standard Packing

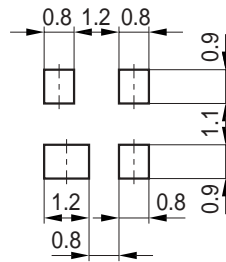
Reel \varnothing 180 mm = 3.000 Pieces/Reel
 Reel \varnothing 330 mm = 10.000 Pieces/Reel



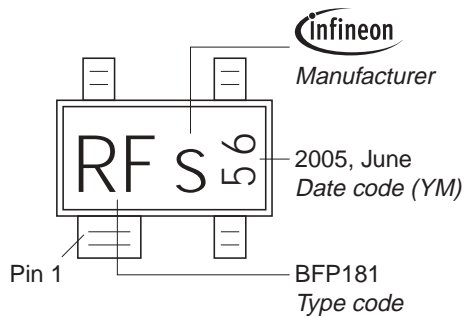
Package Outline



Foot Print

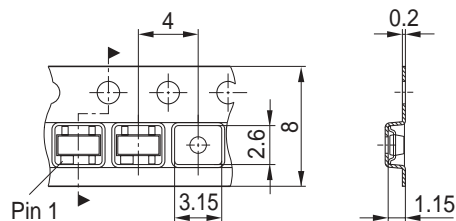


Marking Layout (Example)

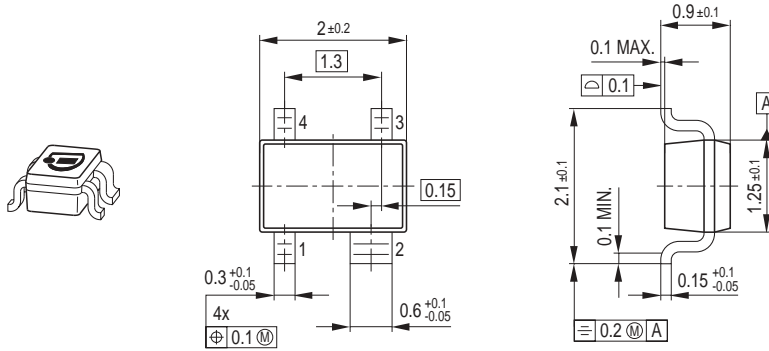


Standard Packing

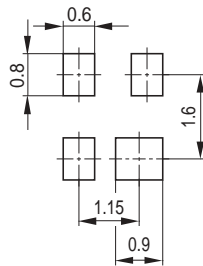
Reel $\varnothing 180 \text{ mm} = 3.000 \text{ Pieces/Reel}$
 Reel $\varnothing 330 \text{ mm} = 10.000 \text{ Pieces/Reel}$



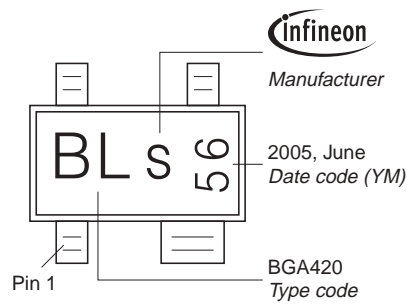
Package Outline



Foot Print

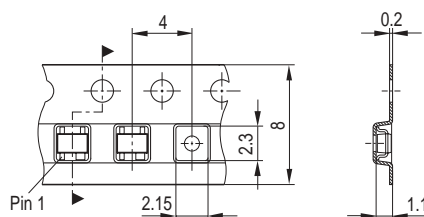


Marking Layout (Example)

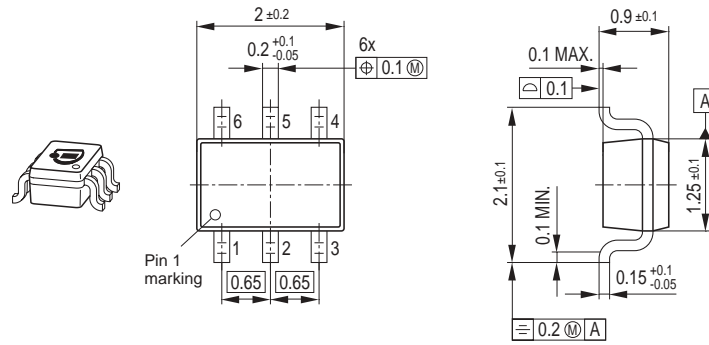


Standard Packing

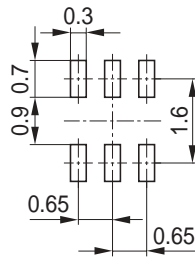
Reel ø180 mm = 3.000 Pieces/Reel
 Reel ø330 mm = 10.000 Pieces/Reel



Package Outline



Foot Print



Marking Layout (Example)

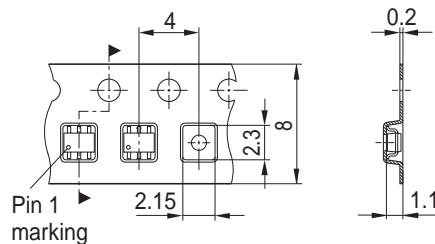
Small variations in positioning of Date code, Type code and Manufacture are possible.



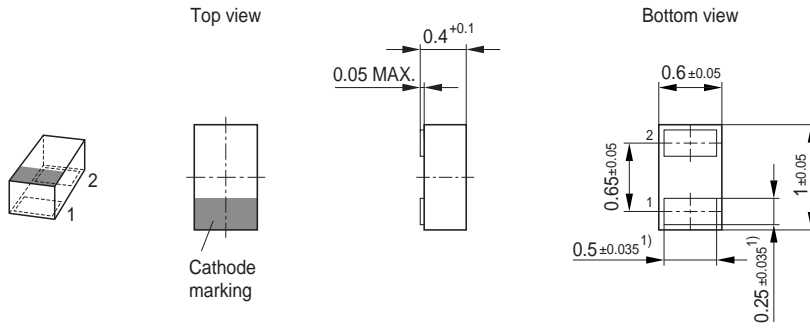
Standard Packing

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.



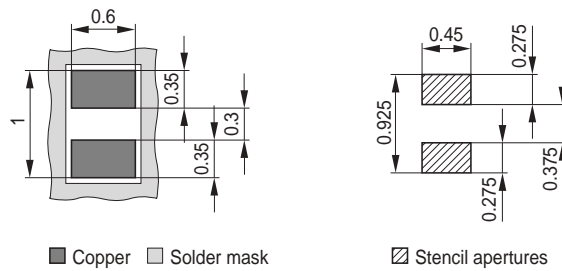
Package Outline



1) Dimension applies to plated terminal

Foot Print

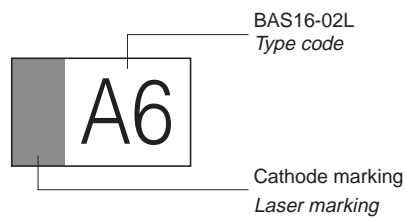
For board assembly information please refer to Infineon website "Packages"



■ Copper □ Solder mask

▨ Stencil apertures

Marking Layout (Example)

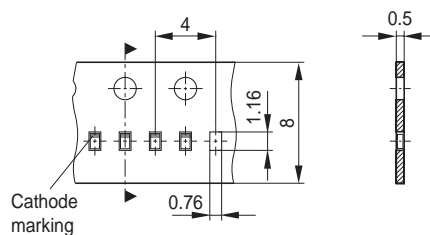


BAS16-02L
Type code

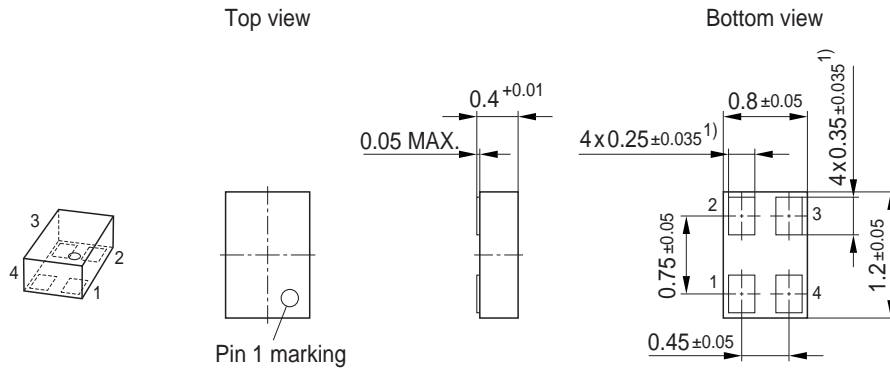
Cathode marking
Laser marking

Standard Packing

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



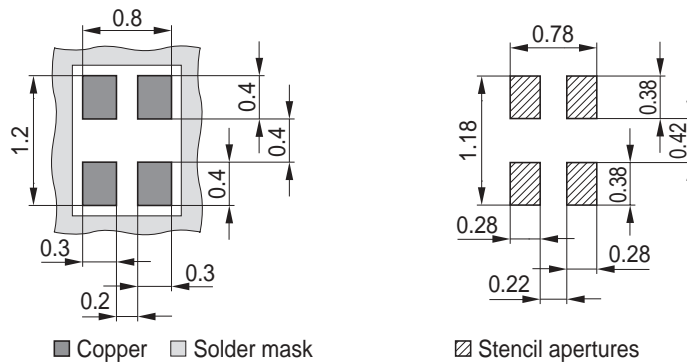
Package Outline



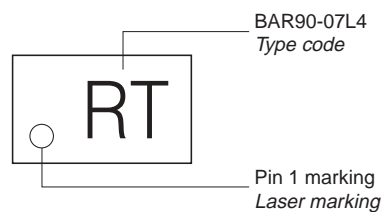
1) Dimension applies to plated terminal

Foot Print

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

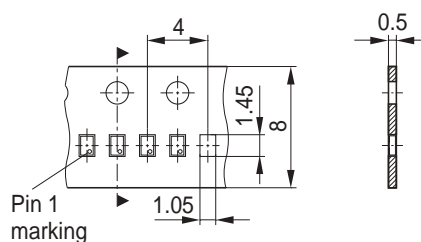


Marking Layout (Example)

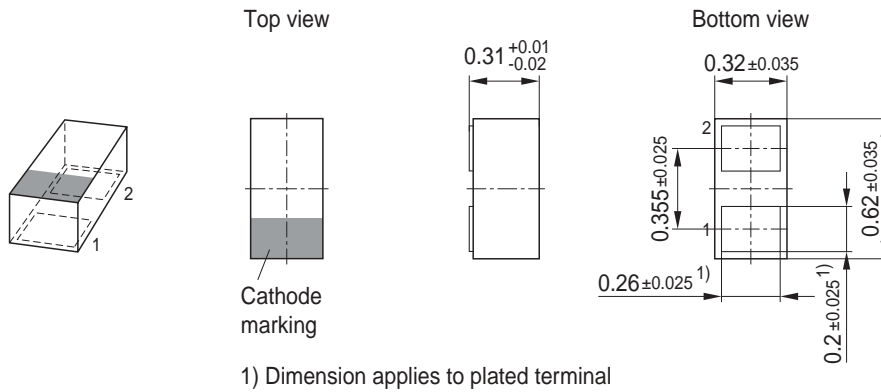


Standard Packing

Reel \varnothing 180 mm = 15.000 Pieces/Reel

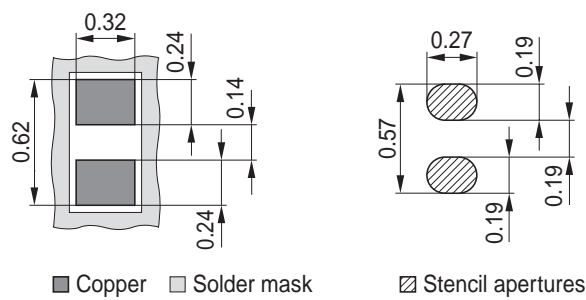


Package Outline

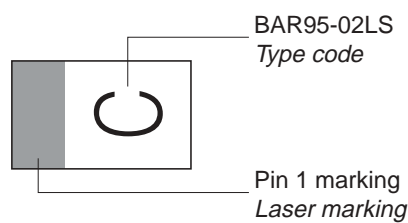


Foot Print

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

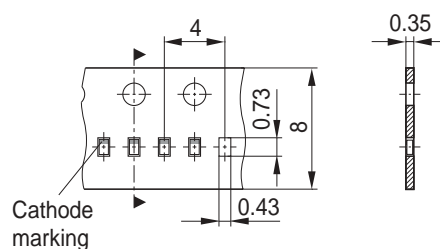


Marking Layout



Standard Packing

Reel ø180 mm = 15.000 Pieces/Reel



Edition 2006-02-01
Published by
Infineon Technologies AG
81726 München, Germany
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