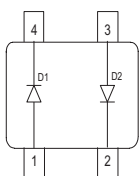


Silicon Schottky Diode

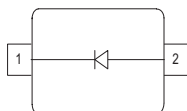
- Low barrier diode for detectors up to GHz frequencies
- Pb-free (RoHS compliant) package



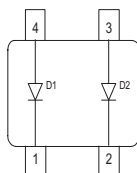
BAT62



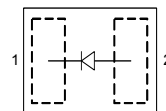
BAT62-03W BAT62-02V BAT62-02W



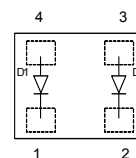
BAT62-07W



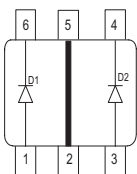
BAT62-02L BAT62-02LS



BAT62-07L4



BAT62-09S



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

Type	Package	Configuration	L_S (nH)	Marking
BAT62-02W**	SCD80	single	0.6	62
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
BAT62-02V	SC79	single	0.6	k
BAT62-03W	SOD323	single	1.8	white L
BAT62-07L4	TSLP-4-4	parallel pair, leadless	0.4	62
BAT62-07W	SOT343	parallel pair	1.8	62s
BAT62-09S	SOT363	parallel high, high isolation	1.6	69s

* Preliminary Data

** Not for new design

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	40	V
Forward current	I_F	20	mA
Total power dissipation BAT62, $T_S \leq 85\text{ °C}$ BAT62-02L, -07L4, -03W, $T_S \leq 108\text{ °C}$ BAT62-02W, -02V, $T_S \leq 109\text{ °C}$ BAT62-07W, $T_S \leq 103\text{ °C}$ BAT62-09S, $T_S \leq 105\text{ °C}$	P_{tot}	100 100 100 100 100	
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, 02V BAT62-07W BAT62-09S	R_{thJS}	≤ 650 ≤ 420 ≤ 410 ≤ 470 $\leq \text{tdb}$	

Electrical Characteristics at $T_A = 25\text{ °C}$, 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 AN077 (Thermal Resistance Calculation)

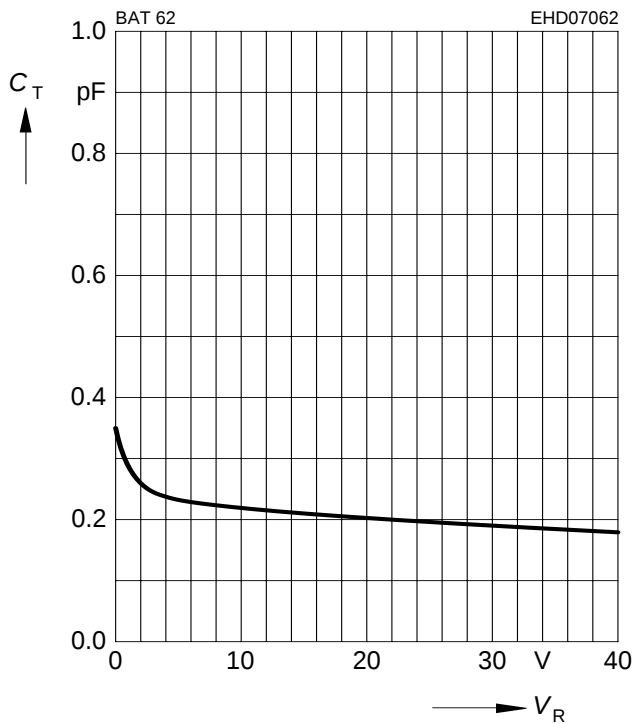
²⁾ ΔV_F is the difference between lowest and highest V_F in a multiple diode component.

Electrical Characteristics at $T_A = 25\text{ °C}$, 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	-	kΩ

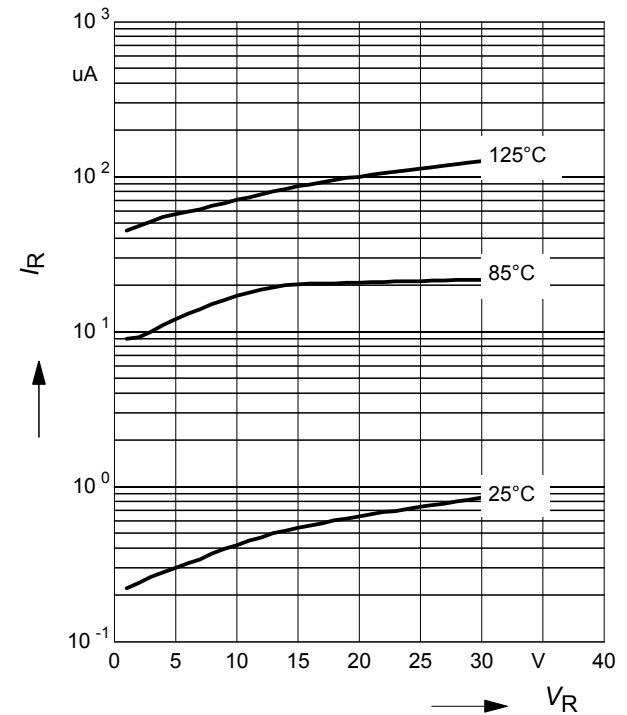
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



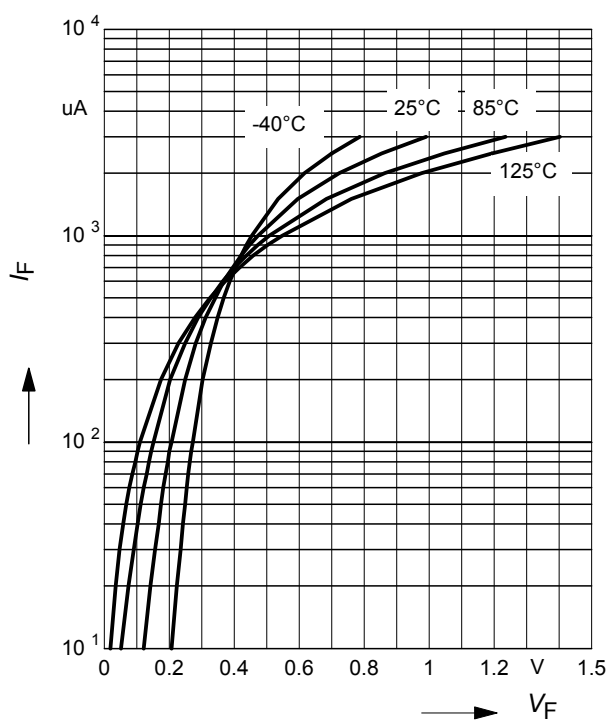
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



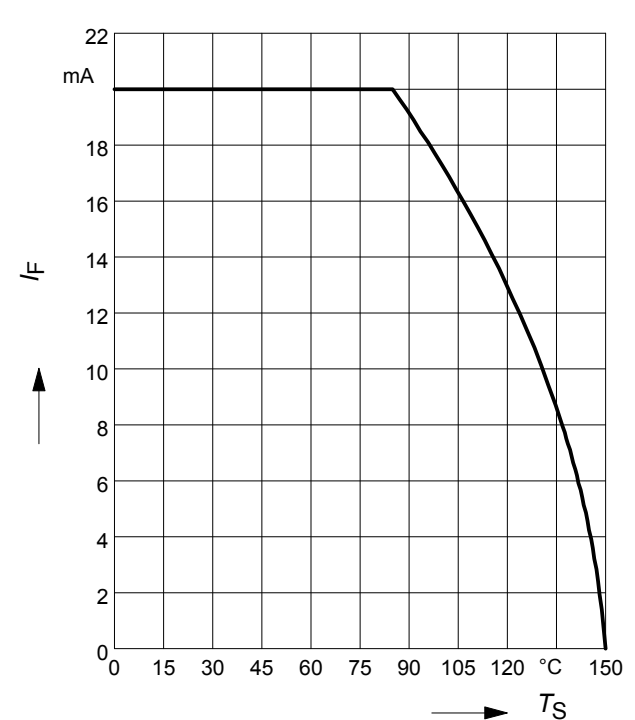
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



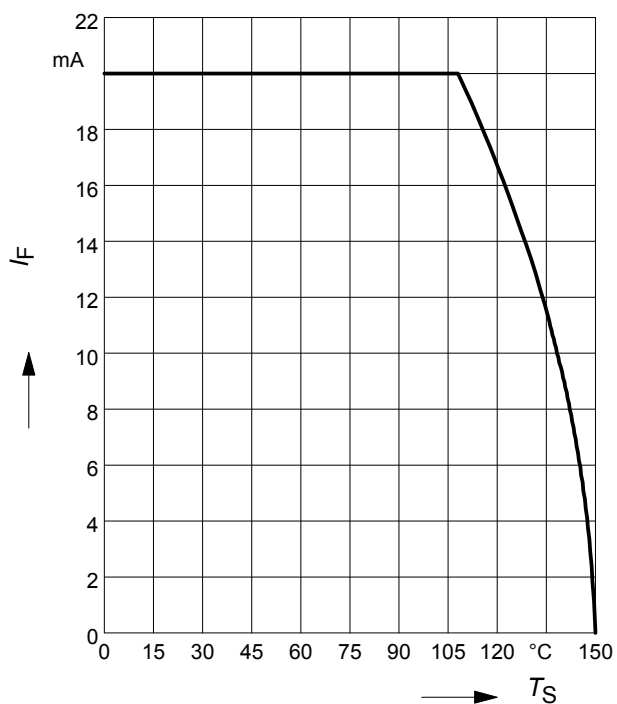
Forward current $I_F = f(T_S)$

BAT62



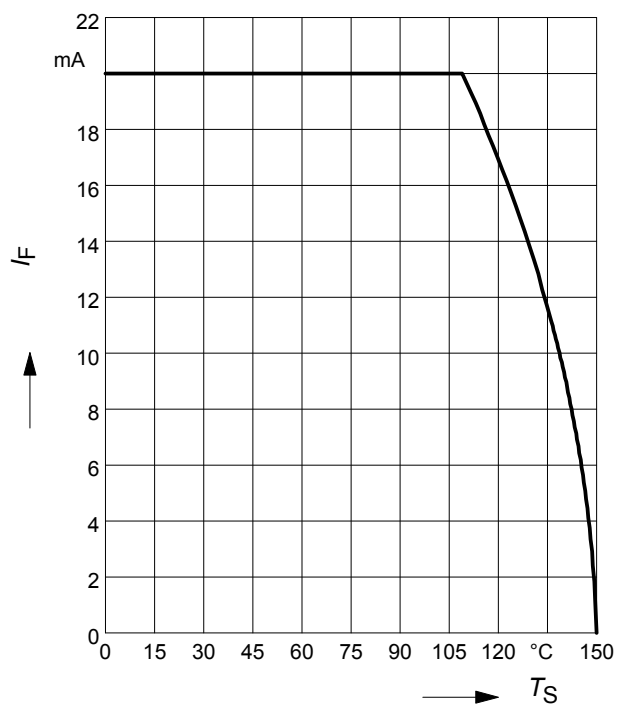
Forward current $I_F = f(T_S)$

BAT62-02L, -07L4



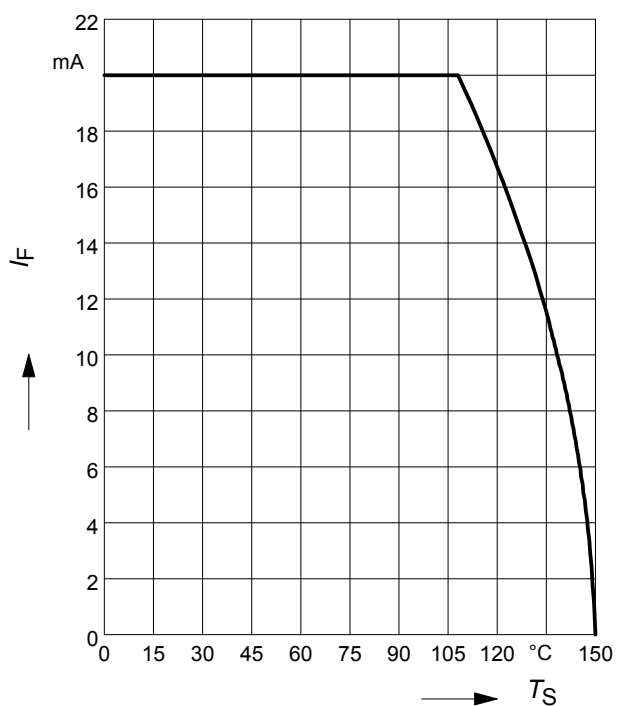
Forward current $I_F = f(T_S)$

BAT62-02W, -02V



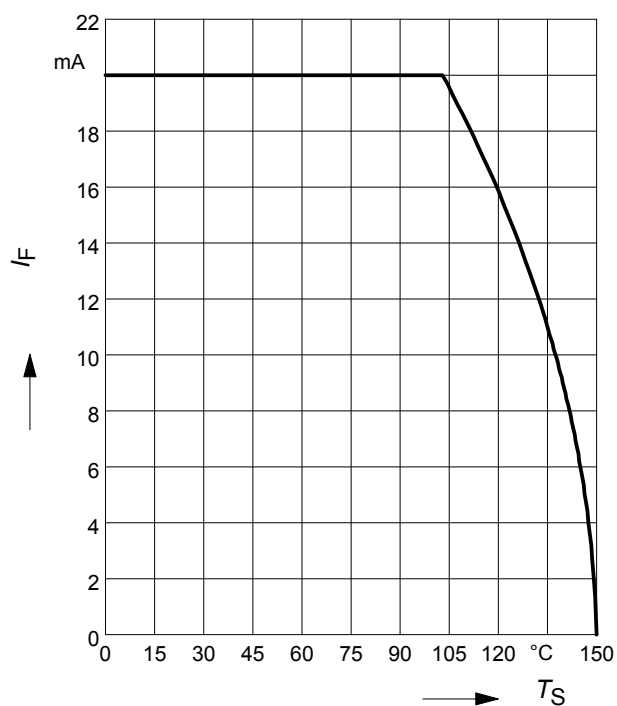
Forward current $I_F = f(T_S)$

BAT62-03W



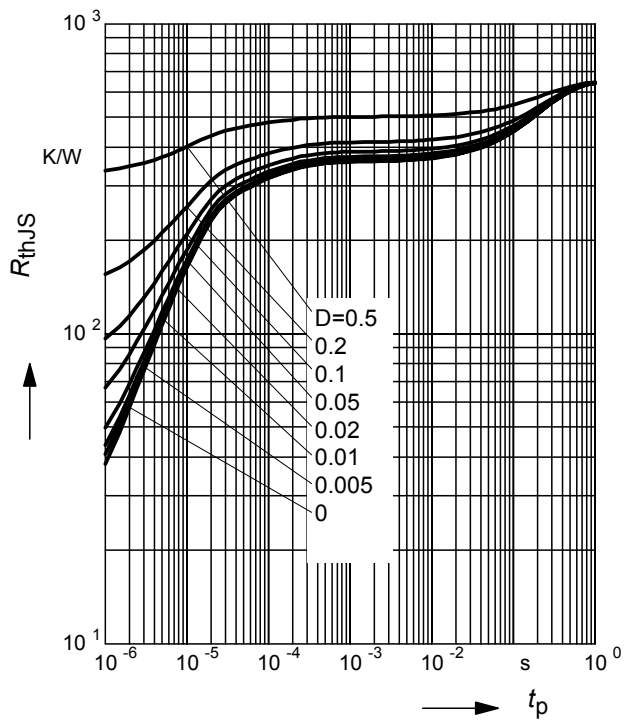
Forward current $I_F = f(T_S)$

BAT62-07W



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

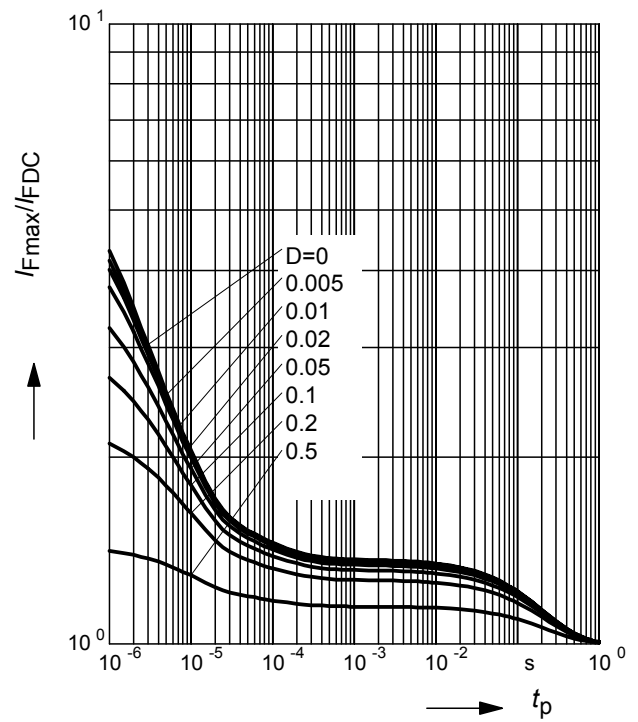
BAT62



Permissible Pulse Load

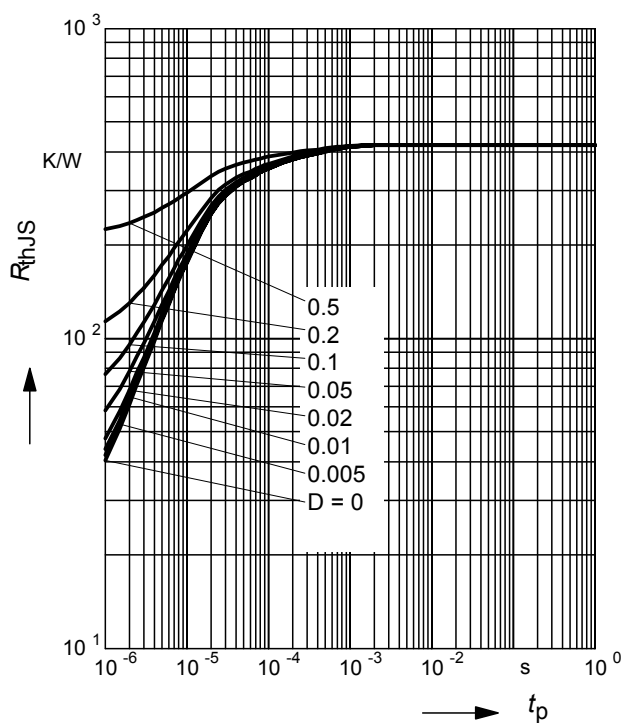
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT62



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

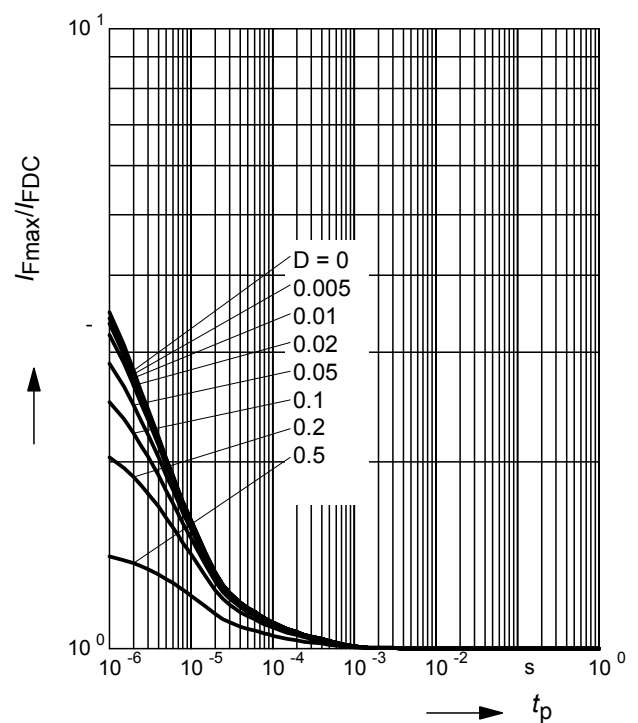
BAT62-02L, -07L4



Permissible Pulse Load

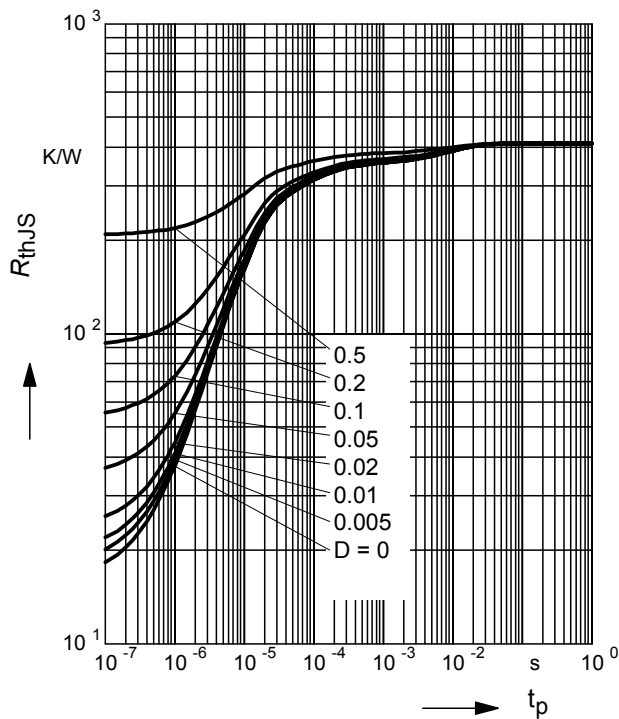
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT62-02L, -07L4



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

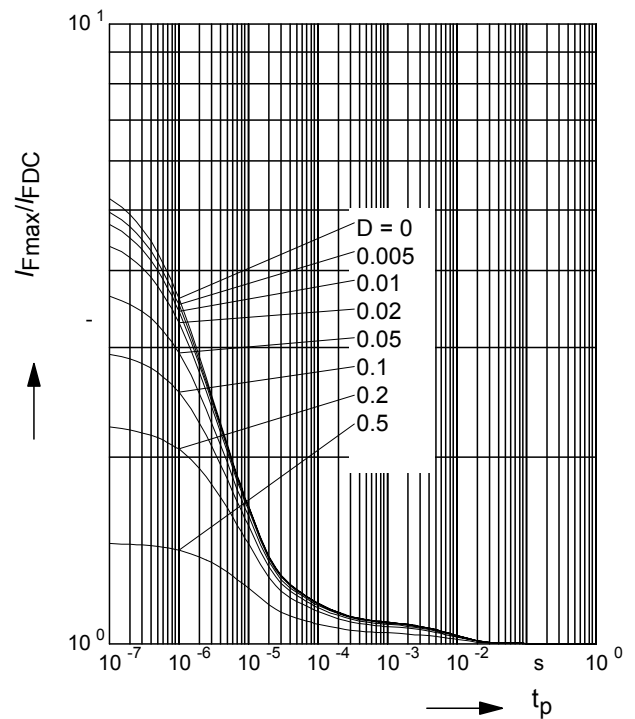
BAT62-02W, 02V



Permissible Pulse Load

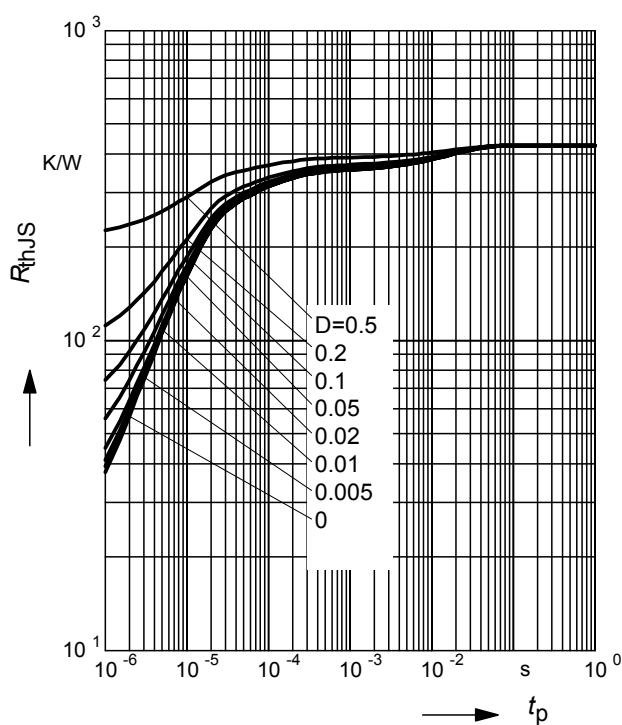
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT62-02W, -02V



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

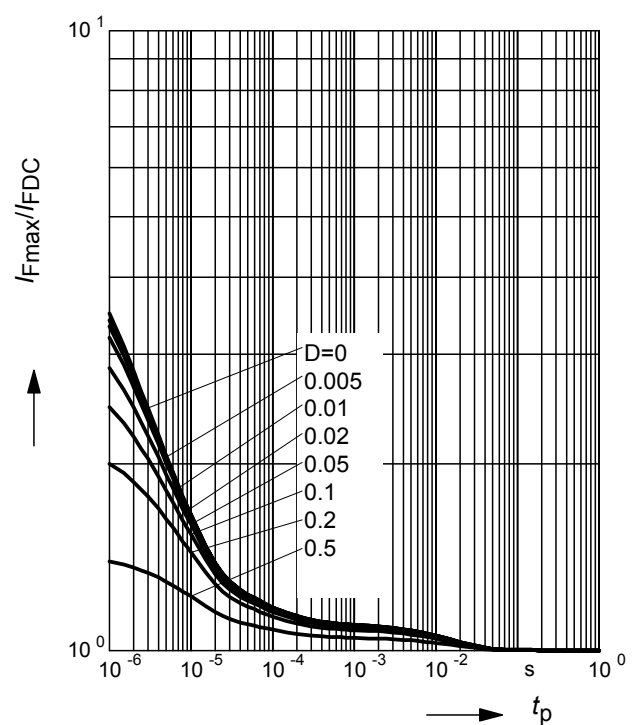
BAT62-03W



Permissible Pulse Load

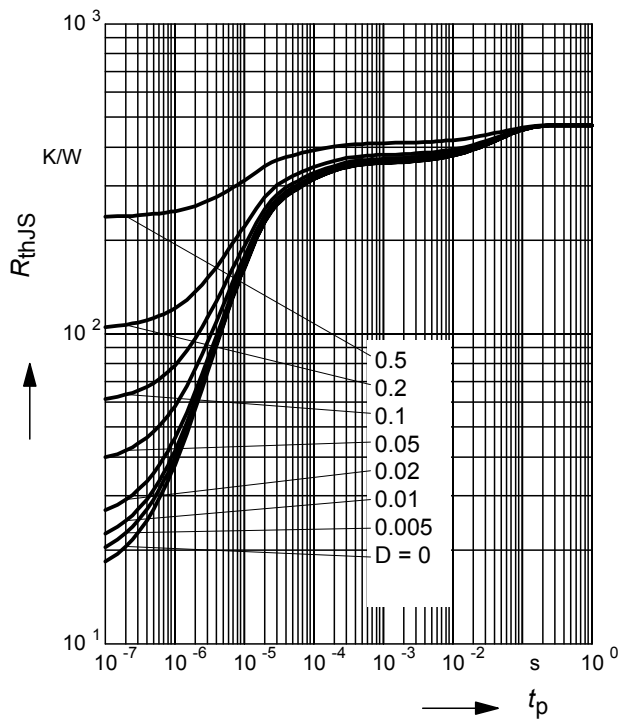
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT62-03W



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

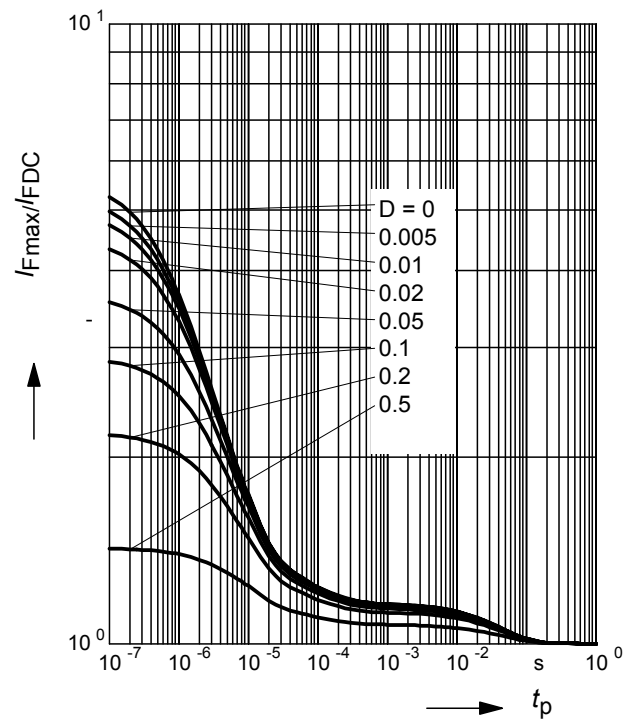
BAT62-07W



Permissible Pulse Load

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

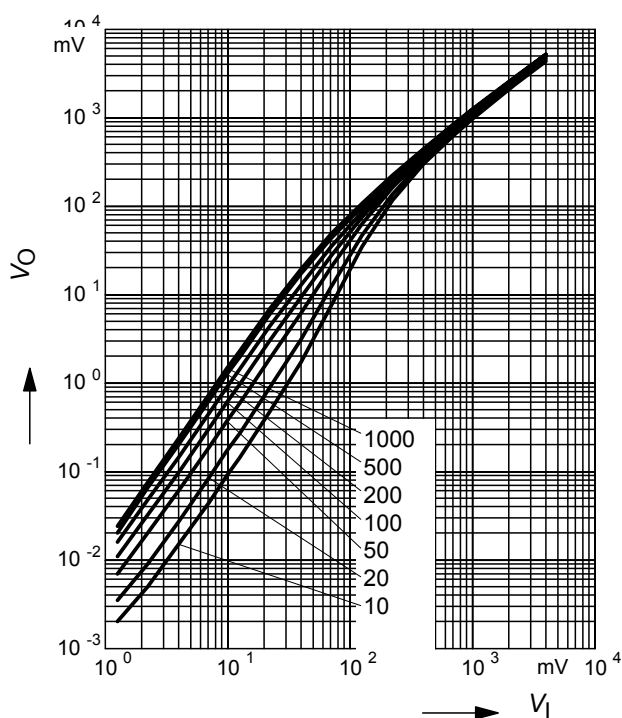
BAT62-07W



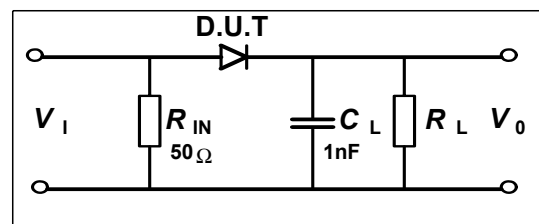
Rectifier voltage $V_{out} = f(V_{in})$

$f = 900\text{MHz}$

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



Testcircuit



Package Outline



Foot Print

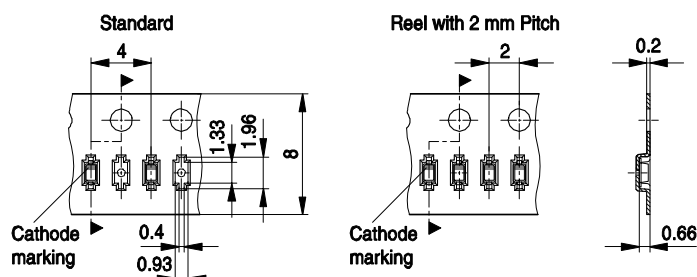


Marking Layout (Example)

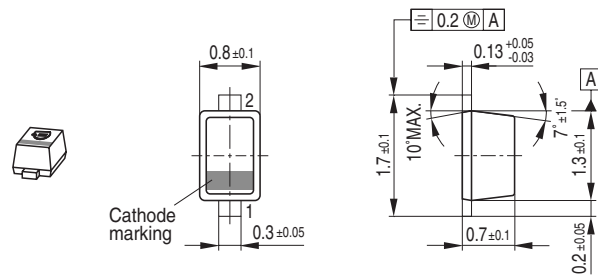


Standard Packing

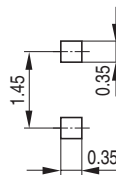
Reel $\varnothing 180$ mm = 3.000 Pieces/Reel
 Reel $\varnothing 180$ mm = 8.000 Pieces/Reel (2 mm Pitch)
 Reel $\varnothing 330$ mm = 10.000 Pieces/Reel



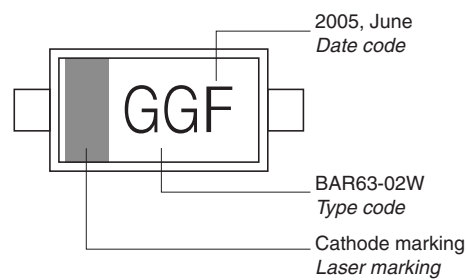
Package Outline



Foot Print



Marking Layout (Example)



Standard Packing

Reel ø180 mm = 3.000 Pieces/Reel
 Reel ø180 mm = 8.000 Pieces/Reel (2 mm Pitch)
 Reel ø330 mm = 10.000 Pieces/Reel

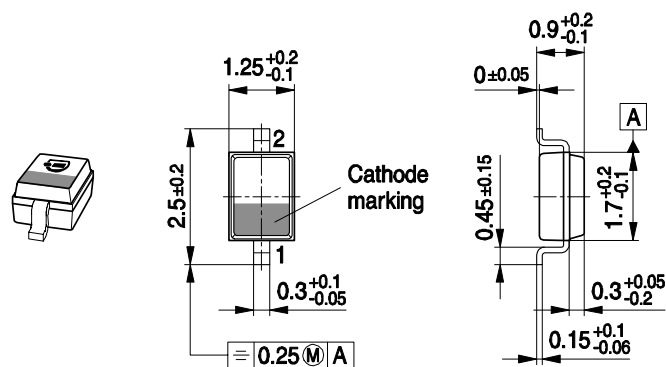


Date Code marking for discrete packages with one digit (SCD80, SC79, SC75¹⁾) CES-Code

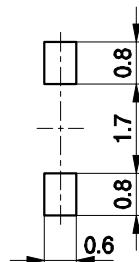
Month	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
01	a	p	A	P	a	p	A	P	a	p	A	P
02	b	q	B	Q	b	q	B	Q	b	q	B	Q
03	c	r	C	R	c	r	C	R	c	r	C	R
04	d	s	D	S	d	s	D	S	d	s	D	S
05	e	t	E	T	e	t	E	T	e	t	E	T
06	f	u	F	U	f	u	F	U	f	u	F	U
07	g	v	G	V	g	v	G	V	g	v	G	V
08	h	x	H	X	h	x	H	X	h	x	H	X
09	j	y	J	Y	j	y	J	Y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

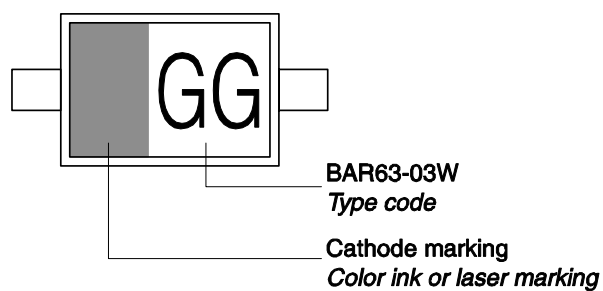
Package Outline



Foot Print

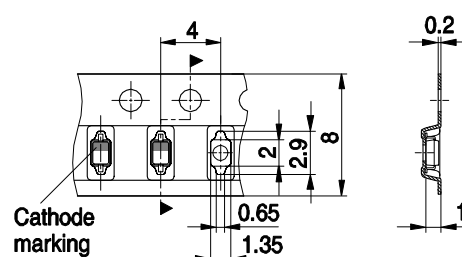


Marking Layout (Example)

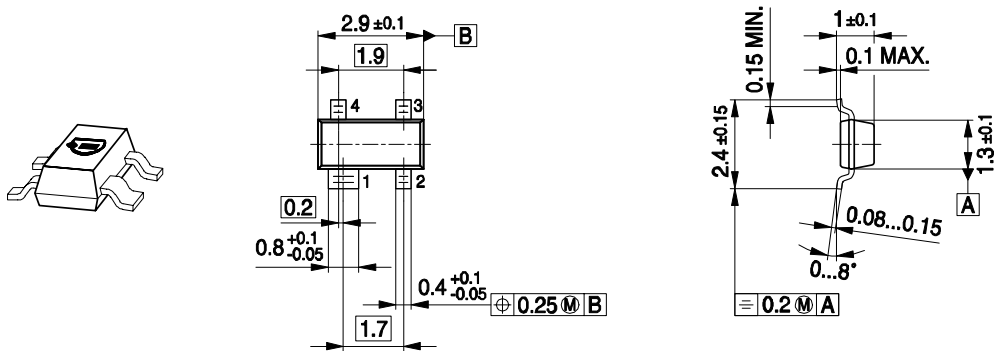


Standard Packing

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



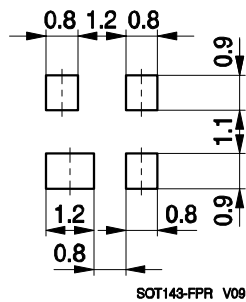
Package Outline



Note: Mold flash, protrusions or gate burrs of 0,2 mm max. per side are not included

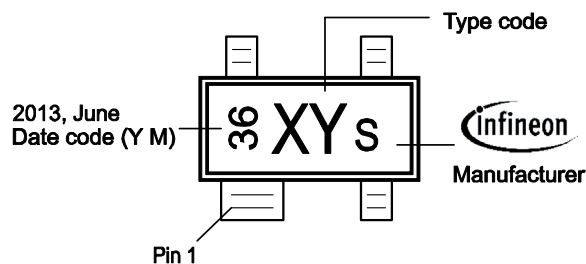
SOT143-PO V09

Foot Print



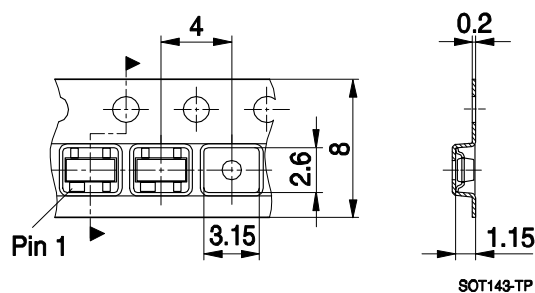
SOT143-FPR V09

Marking Layout (Example)



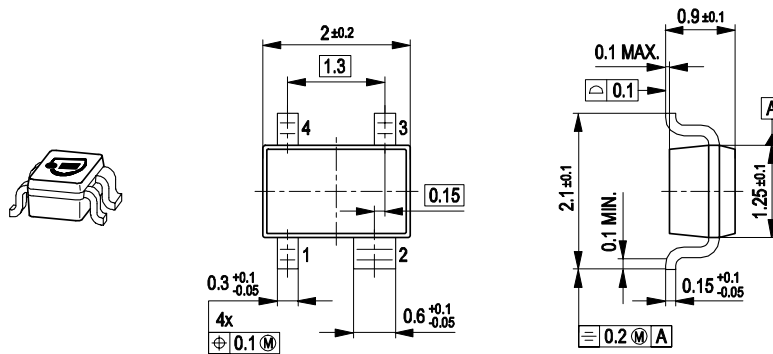
Standard Packing

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

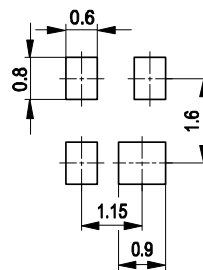


SOT143-TP

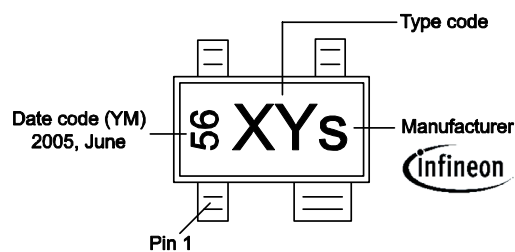
Package Outline



Foot Print

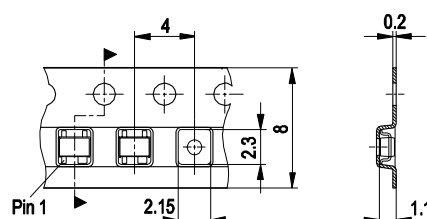


Marking Layout (Example)

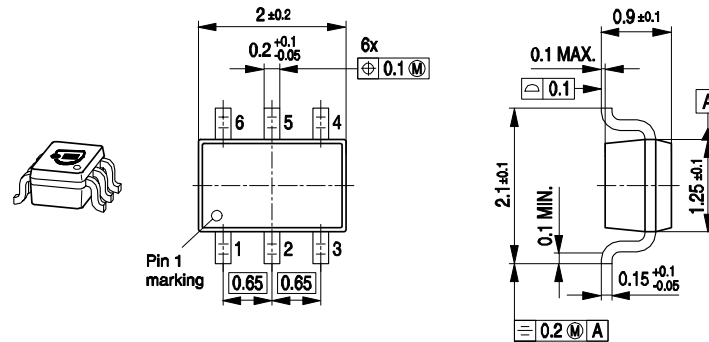


Standard Packing

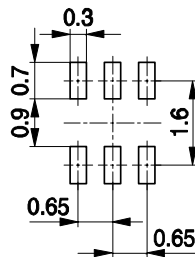
Reel $\varnothing 180$ mm = 3.000 Pieces/Reel
 Reel $\varnothing 330$ mm = 10.000 Pieces/Reel



Package Outline

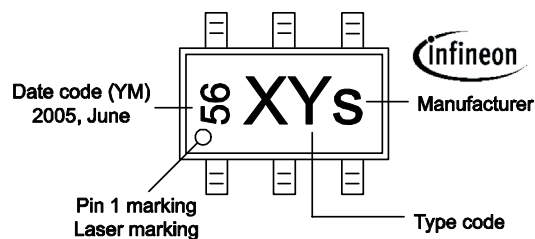


Foot Print



Marking Layout (Example)

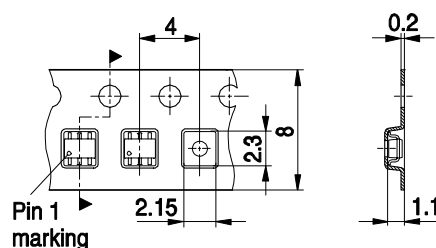
Small variations in positioning of Date code, Type code and Manufacturer are possible.



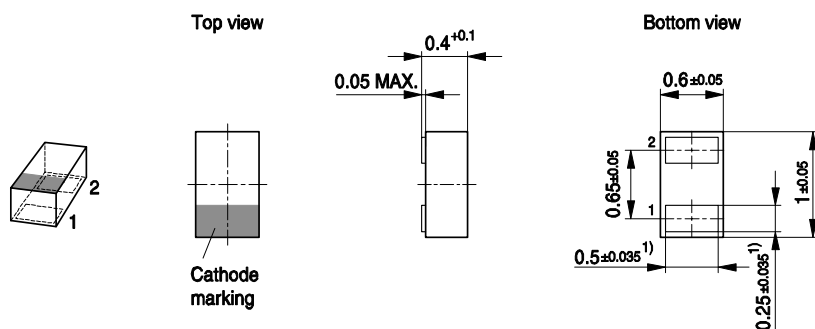
Standard Packing

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

For symmetric types no defined Pin 1 orientation in reel.

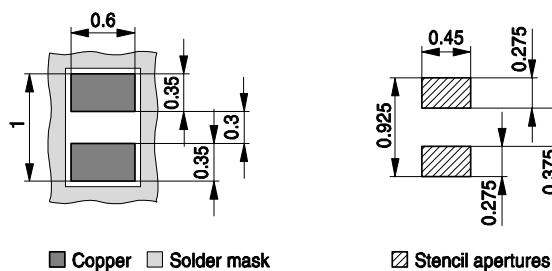


Package Outline

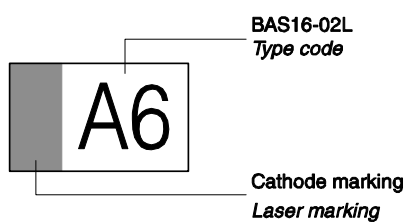


Foot Print

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



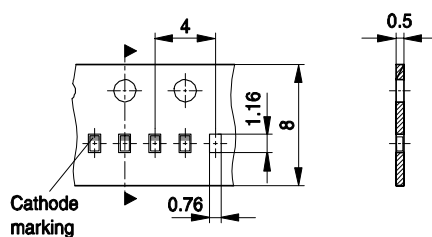
Marking Layout (Example)



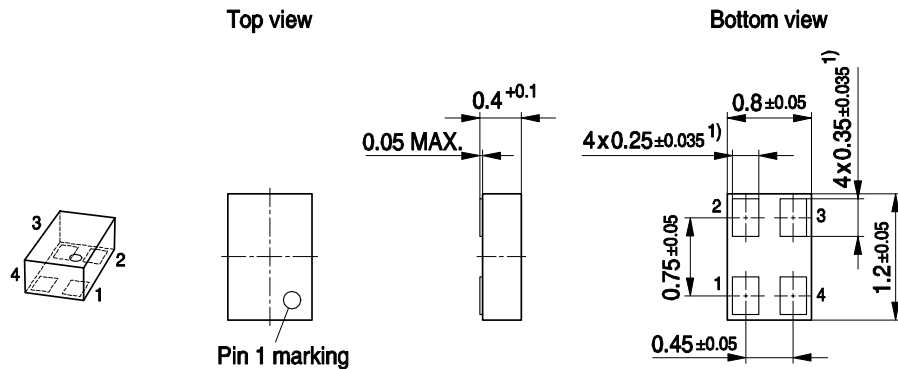
Standard Packing

Reel ø180 mm = 15.000 Pieces/Reel

Reel ø330 mm = 50.000 Pieces/Reel (optional)



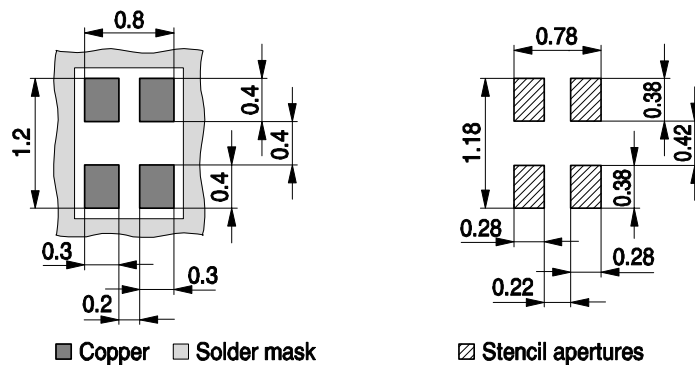
Package Outline



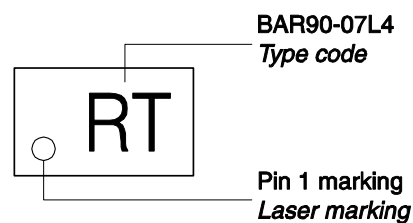
1) Dimension applies to plated terminal

Foot Print

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

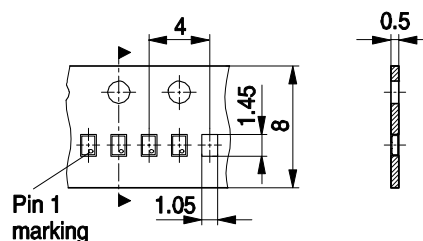


Marking Layout (Example)

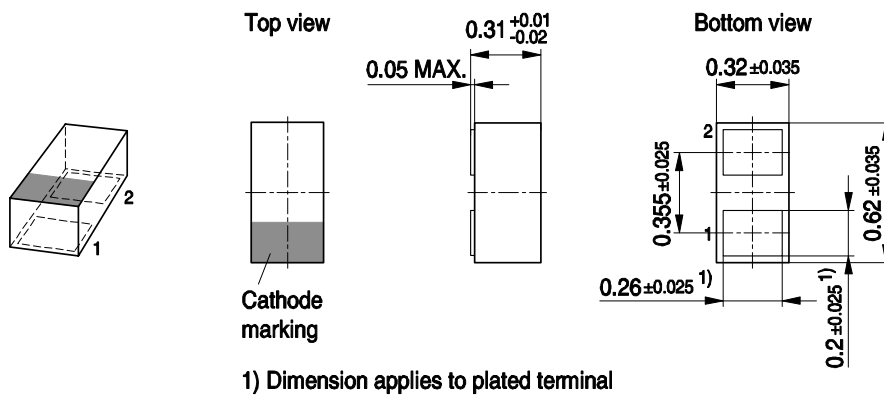


Standard Packing

Reel $\varnothing 180 \text{ mm} = 15.000 \text{ Pieces/Reel}$

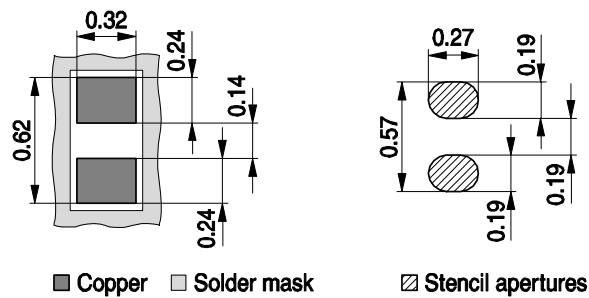


Package Outline

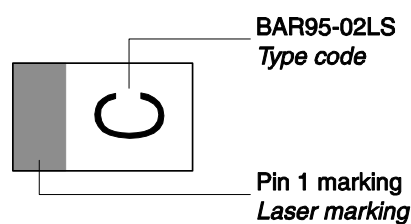


Foot Print

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

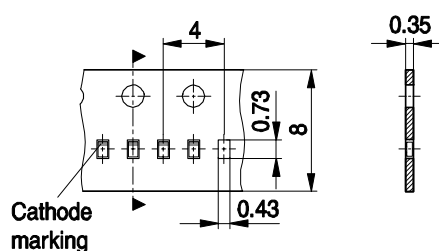


Marking Layout (Example)



Standard Packing

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



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Электрон
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