



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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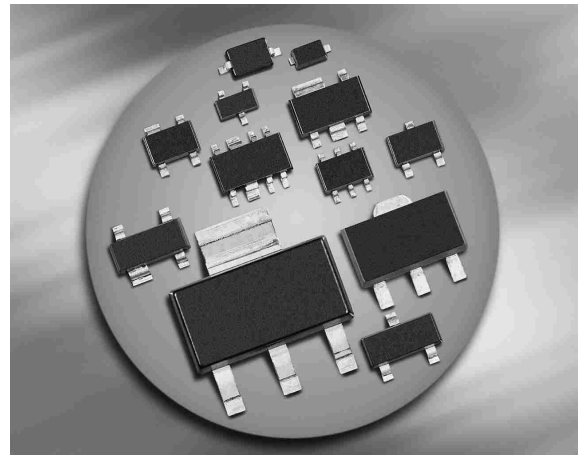
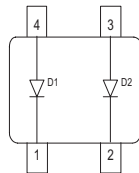
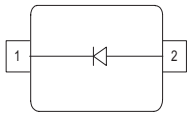
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**Silicon Schottky Diode**

- Low barrier diode for detectors up to GHz frequencies
- For high-speed applications
- Zero bias detector diode
- Pb-free (RoHS compliant) package


**BAT63-02V**
**BAT63-07W**


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

Type	Package	Configuration	$L_S$ (nH)	Marking
BAT63-02V	SC79	single	0.6	d
BAT63-07W	SOT343	parallel pair	1.6	63s

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	$V_R$	3	V
Forward current	$I_F$	100	mA
Total power dissipation	$P_{\text{tot}}$		mW
$T_S \leq 120^\circ\text{C}$ , BAT63-02V		100	
$T_S \leq 114^\circ\text{C}$ , BAT63-07W		100	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-55 ... 150	

**Thermal Resistance**

Parameter	Symbol	Value	Unit
Junction - soldering point <sup>1)</sup>	$R_{\text{thJS}}$		K/W
BAT63-02V		$\leq 295$	
BAT63-07W		$\leq 355$	

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

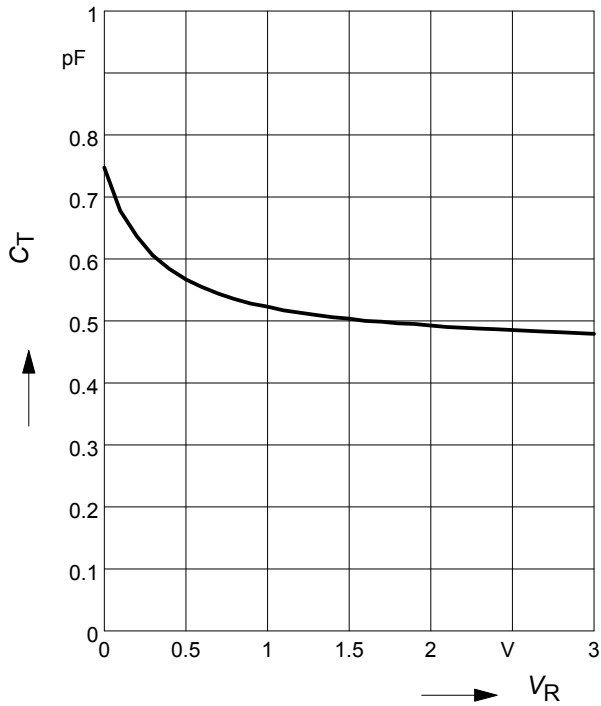
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>DC Characteristics</b>					
Reverse current $V_R = 3\text{ V}$	$I_R$	-	-	10	$\mu\text{A}$
Forward voltage $I_F = 1\text{ mA}$	$V_F$	-	190	300	mV
Forward voltage matching <sup>2)</sup> $I_F = 1\text{ mA}$	$\Delta V_F$	-	-	20	
<b>AC Characteristics</b>					
Diode capacitance $V_R = 0.2\text{ V}, f = 1\text{ MHz}$	$C_T$	-	0.65	0.85	pF
Differential resistance $V_R = 0, f = 10\text{ kHz}$	$R_0$	-	30	-	k $\Omega$

<sup>1</sup>For calculation of  $R_{thJA}$  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.

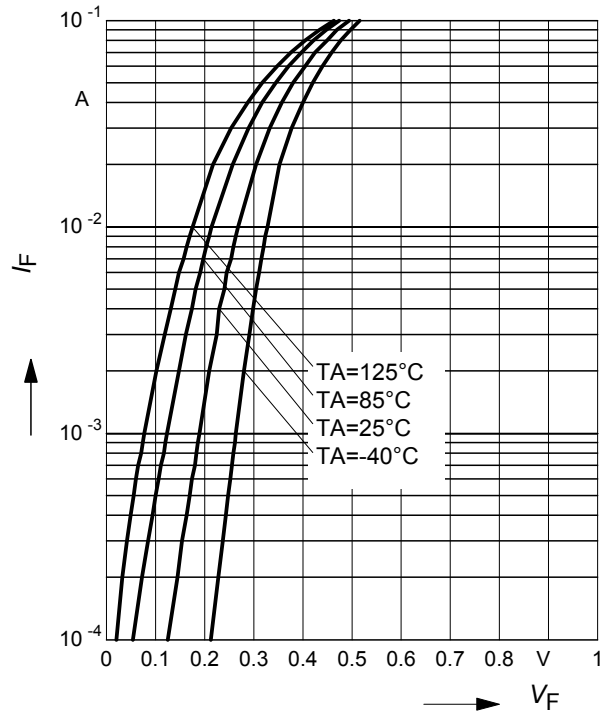
**Diode capacitance  $C_T = f(V_R)$**

$f = 1\text{MHz}$



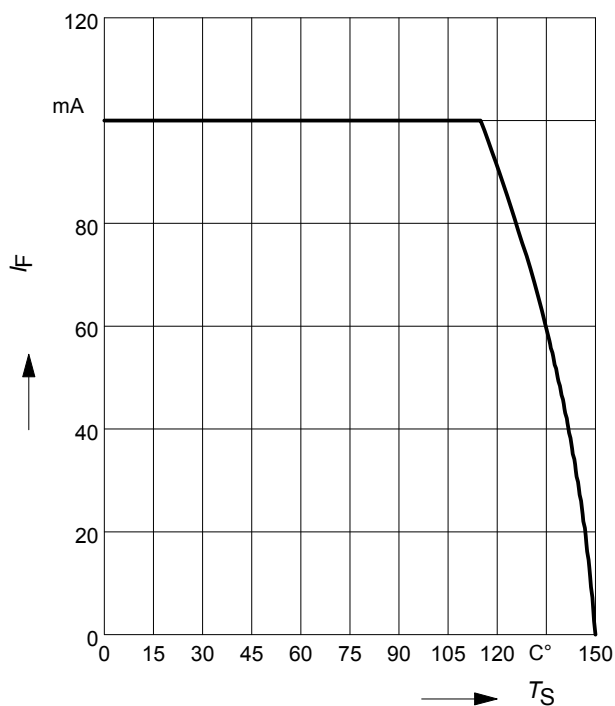
**Forward current  $I_F = f(V_F)$**

$T_A = \text{Parameter}$



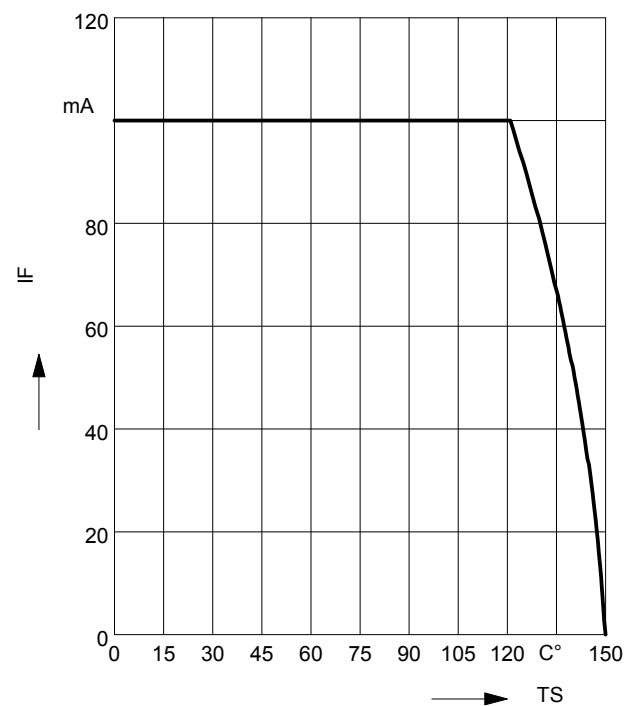
**Forward current  $I_F = f(T_S)$**

BAT63-07W



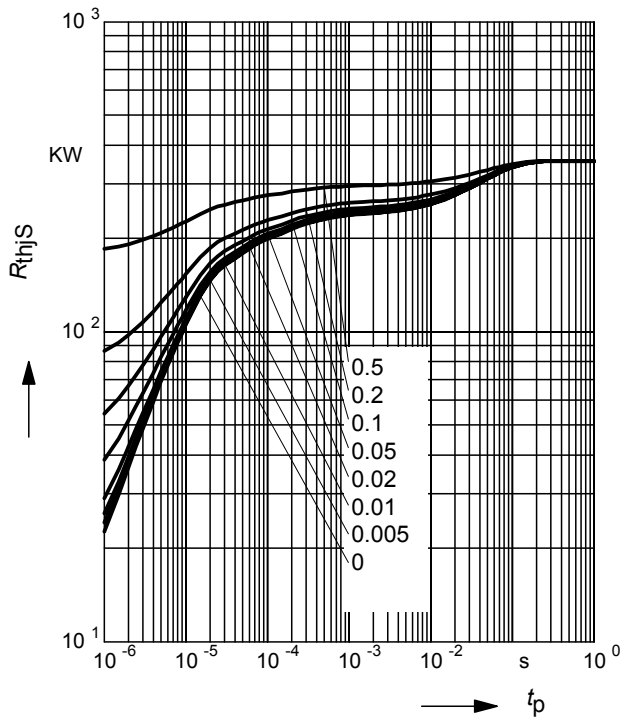
**Forward current  $I_F = f(T_S)$**

BAT63-02V



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

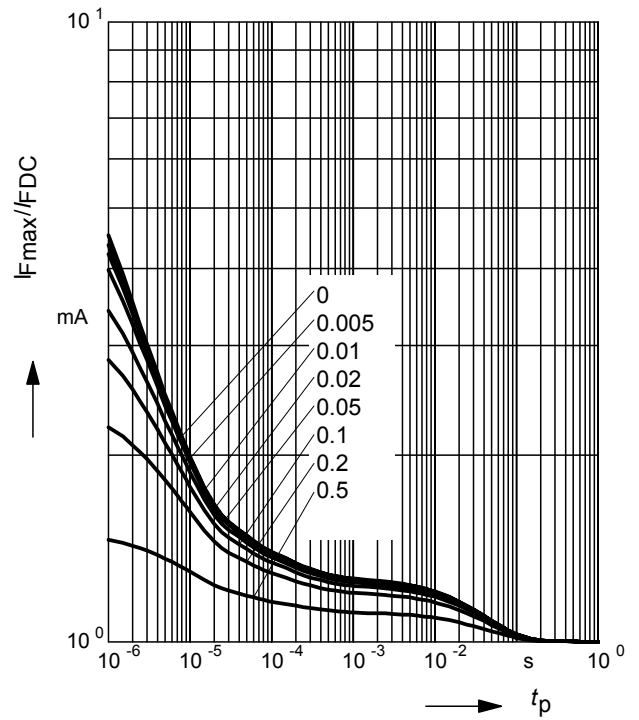
BAT63-07W



**Permissible Pulse Load**

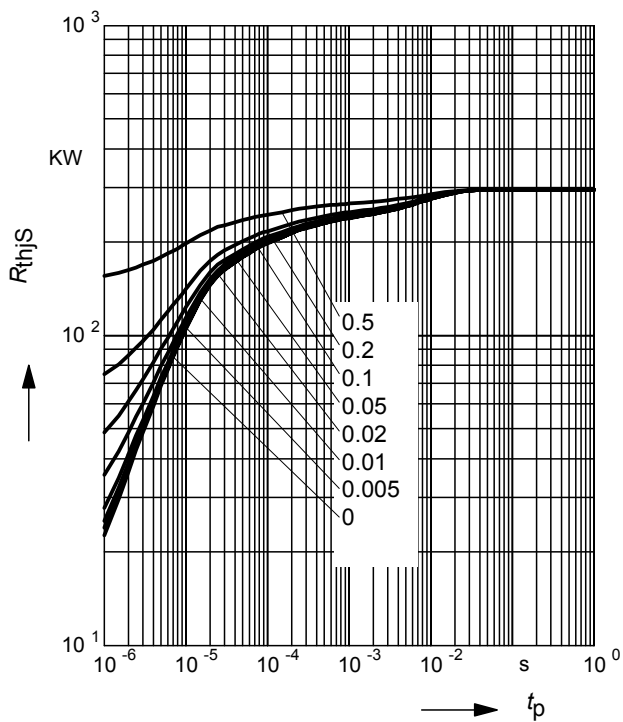
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT63-07W



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

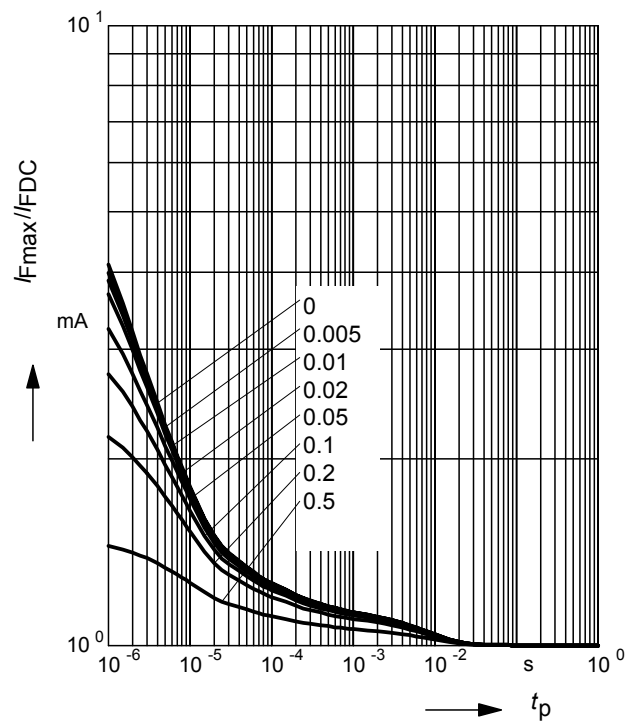
BAT63-02V



**Permissible Pulse Load**

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

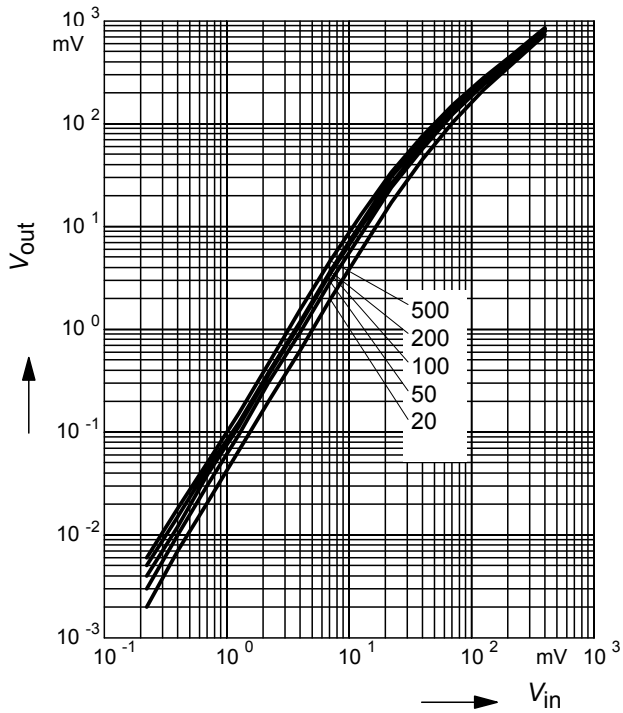
BAT63-02V



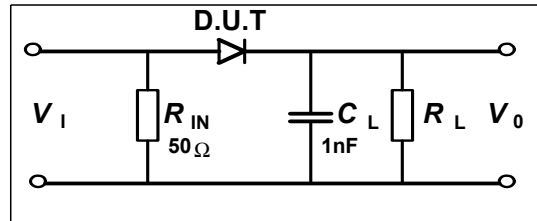
Rectifier voltage  $V_{out} = f(V_{in})$

$f = 2.4\text{GHz}$

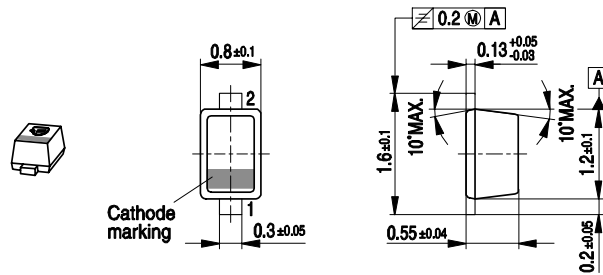
$R_L =$  Parameter in  $k\Omega$



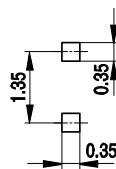
Testcircuit



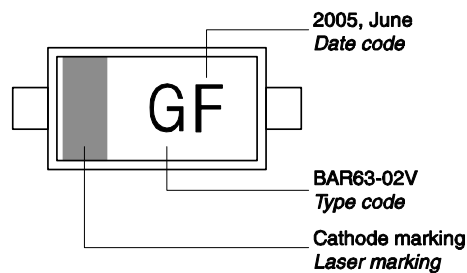
### Package Outline



### Foot Print

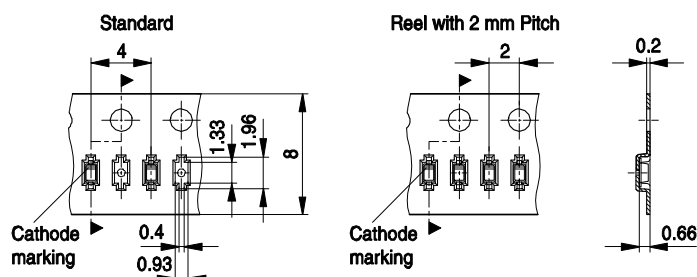


### Marking Layout (Example)



### 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



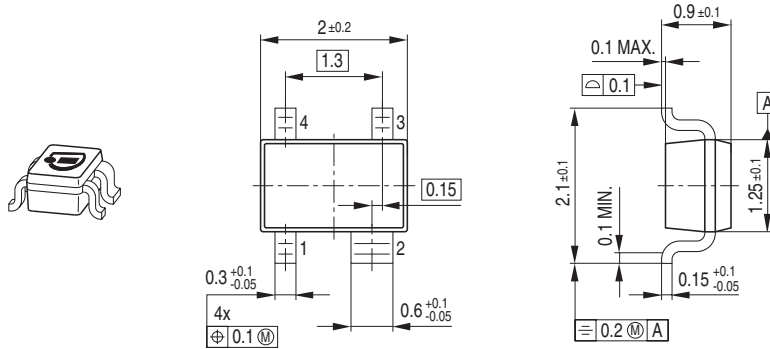
Date Code marking for discrete packages with one digit (SCD80, SC79, SC75<sup>1)</sup>) CES-Code

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

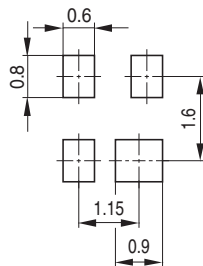
1) New Marking Layout for SC75, implemented at October 2005.



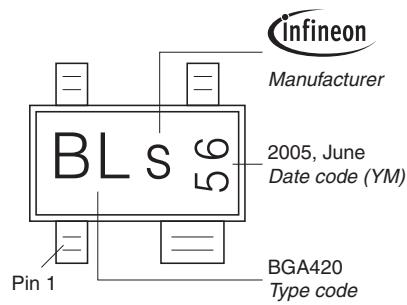
Package Outline



Foot Print

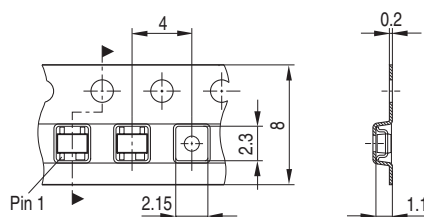


Marking Layout (Example)



Standard Packing

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



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