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.

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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!
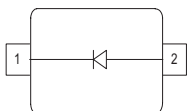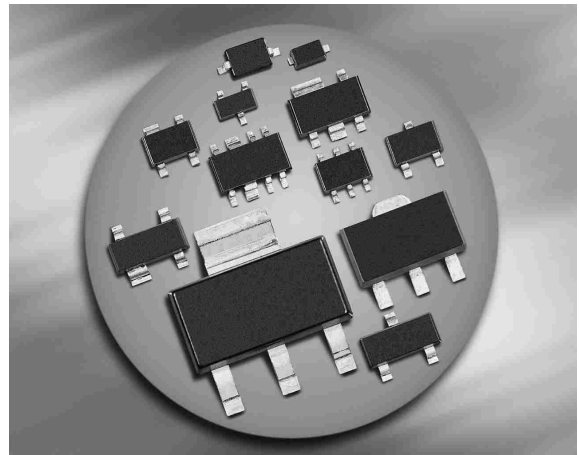

Contact us

Silicon Tuning Diodes

- Excellent linearity

- High Q hyperabrupt tuning diode

- Low series resistance

- Designed for low tuning voltage operation
  for VCO's in mobile communications equipment

- Very low capacitance spread

- Pb-free (RoHS compliant) package

RoHS

BBY55-02V
BBY55-02W
BBY55-03W

Type	Package	Configuration	L_S(nH)	Marking
BBY55-02V	SC79	single	0.6	7
BBY55-02W	SCD80	single	0.6	77
BBY55-03W	SOD323	single	1.8	white 7

Maximum Ratings at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	16	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ... 150	°C
Storage temperature	T_{stg}	-55 ... 150	

2011-06-15

Electrical Characteristics at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current V_R = 15 V V_R = 15 V, T_A = 85 °C	I_R	- -	- -	3 100	nA
AC Characteristics					
Diode capacitance V_R = 1 V, f = 1 MHz V_R = 2 V, f = 1 MHz V_R = 3 V, f = 1 MHz V_R = 4 V, f = 1 MHz V_R = 10 V, f = 1 MHz	C_T	17.5 14 11.6 10 5.5	18.6 15 12.6 11 6	19.6 16 13.6 12 6.5	pF
Capacitance ratio V_R = 2 V, V_R = 10 V, f = 1 MHz	C_{T2}/C_{T10}	2	2.5	3	
Series resistance V_R = 5 V, f = 470 MHz	r_S	-	0.15	0.4	Ω

2011-06-15

Diode capacitance $C_T = f(V_R)$

f = 1MHz
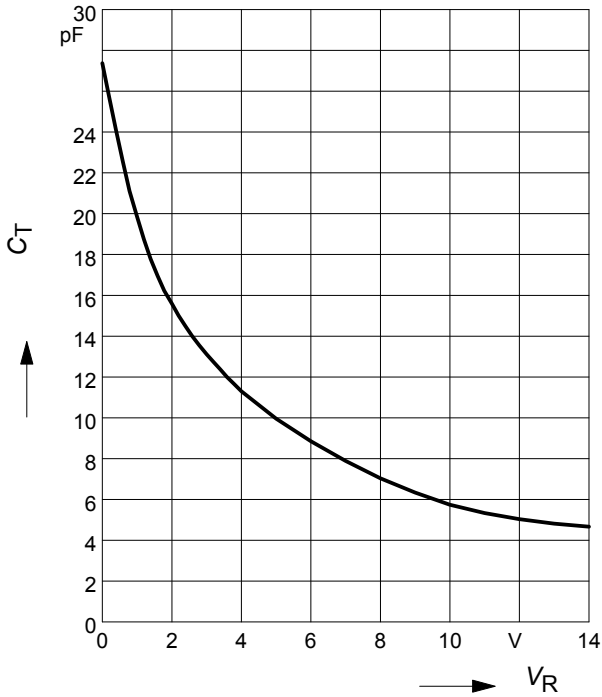
Capacitance change $\Delta C = f(T_A)$

f = 1 MHz
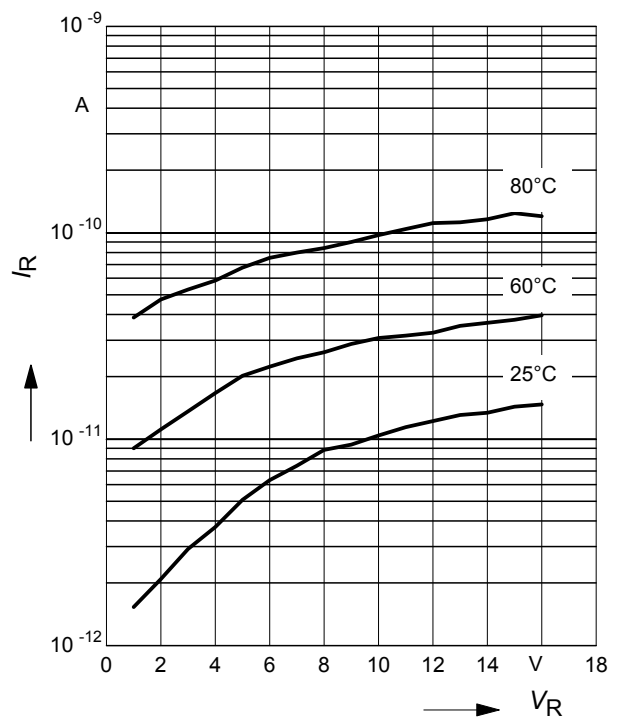
$$\Delta C = (C(TA) - C(25°C))/C(25°C)$$
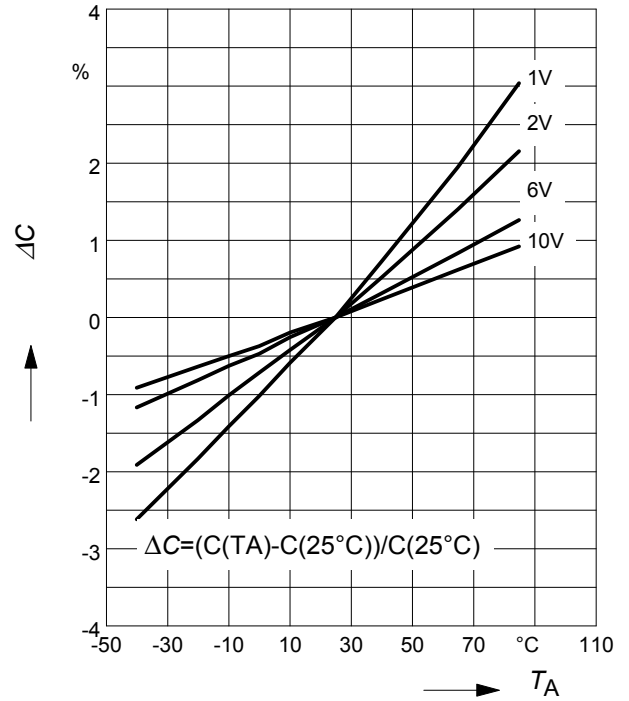
Series resistance $r_S = f(V_R)$

f = 470 MHz
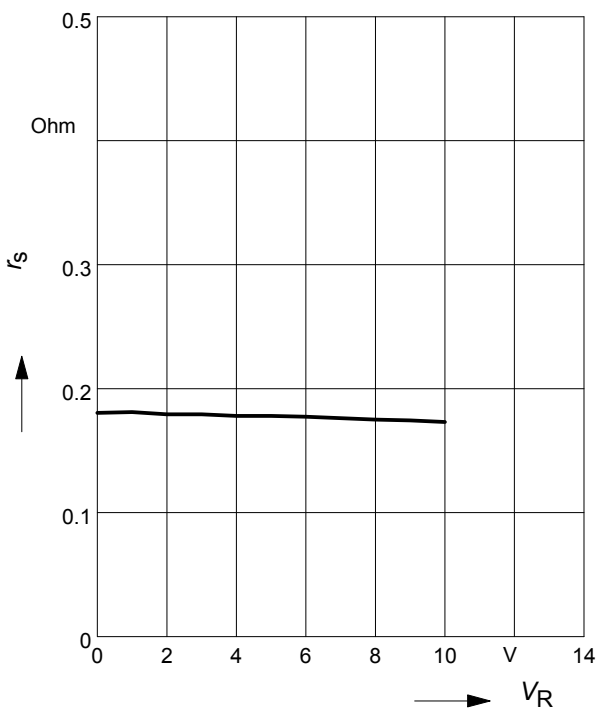
Reverse current $I_R = f(V_R)$

T_A = Parameter
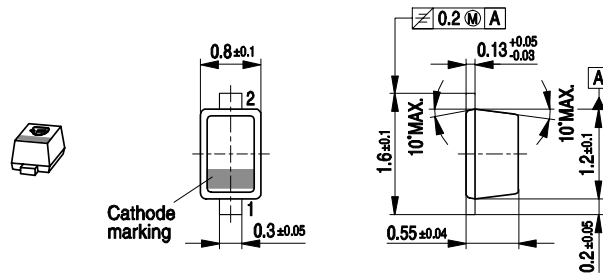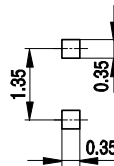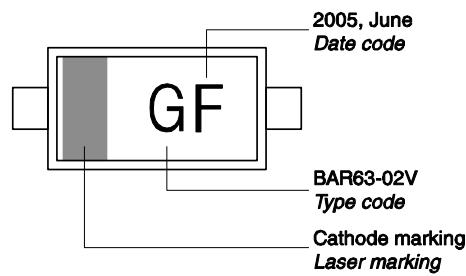
3   2011-06-15

Package Outline

Cathode marking

0.8±0.1
0.3±0.05

0.2 Ⓜ A
0.13 +0.05/-0.03
1.6±0.1
10°MAX.
10°MAX.
A
1.2±0.1
0.55±0.04
0.2±0.05

Foot Print

1.35
0.35
0.35

Marking Layout (Example)

GF

2005, June
Date code

BAR63-02V
Type code

Cathode marking
Laser marking

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

Standard
4
1.33
1.96
8
Cathode marking
0.4
0.93

Reel with 2 mm Pitch
2
Cathode marking

0.2
0.66

Package Outline

0.8 ±0.1

2

Cathode
marking

1

0.3 ±0.05

⊟ 0.2 Ⓜ A

0.13 +0.05 -0.03

A

1.7 ±0.1

10°MAX.

7° ±1.5°

1.3 ±0.1

0.7 ±0.1

0.2 ±0.05

Foot Print

1.45

0.35

0.35

Marking Layout (Example)

2005, June
Date code

GGF

BAR63-02W
Type code

Cathode marking
Laser marking

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

Standard

4

1.45

8

2.5

Cathode
marking

0.4

0.9

Reel with 2 mm Pitch
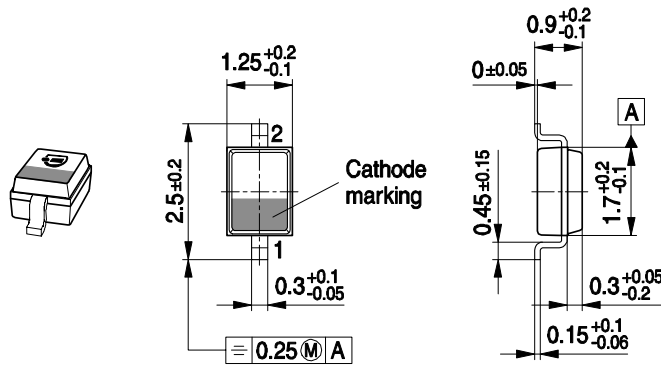
2

Cathode
marking

0.2

0.7
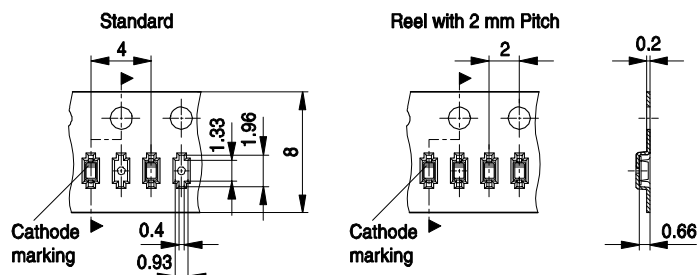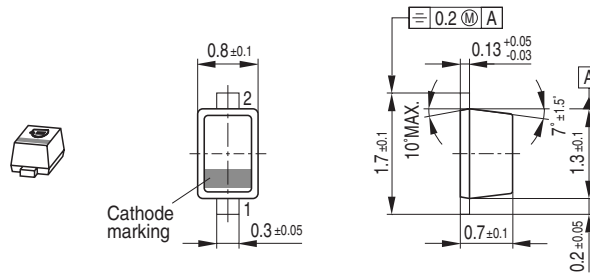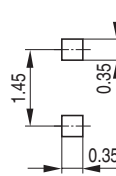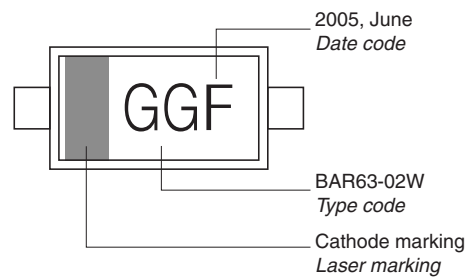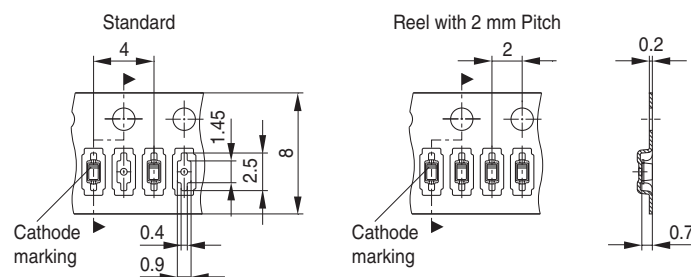
Date Code marking for discrete packages with one digit (SCD80, SC79, SC75[1)]) CES-Code

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

Cathode marking

1.25 $^{+0.2}_{-0.1}$

2.5 ±0.2

0.3 $^{+0.1}_{-0.05}$

0.25 Ⓜ A

0.9 $^{+0.2}_{-0.1}$

0 ±0.05

A

0.45 ±0.15

1.7 $^{+0.2}_{-0.1}$

0.3 $^{+0.05}_{-0.2}$

0.15 $^{+0.1}_{-0.06}$

Foot Print

0.8

1.7

0.8

0.6

Marking Layout (Example)

GG

BAR63-03W
Type code

Cathode marking
Color ink or laser marking
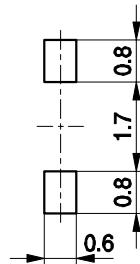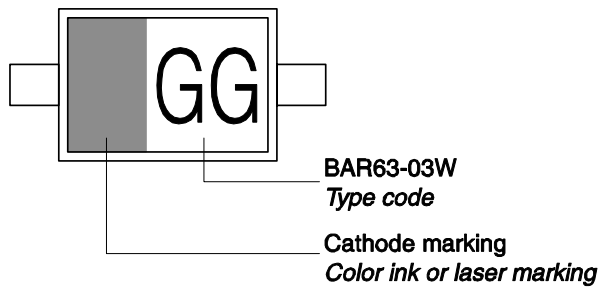
Standard Packing

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

4

0.2

2.9

2

8

Cathode marking

0.65

1.35

1

7
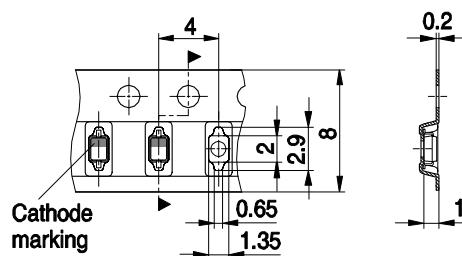
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2011-06-15