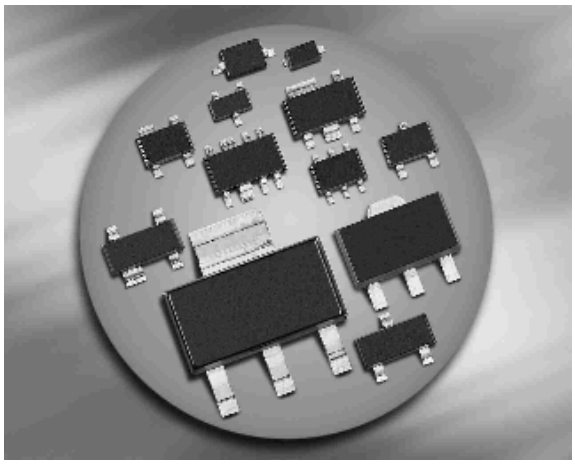
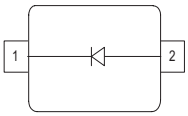
Silicon Tuning Diodes

- 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

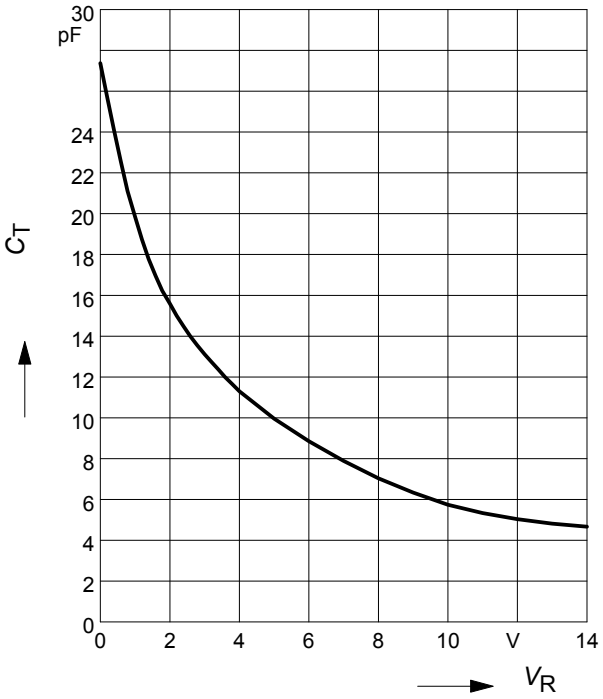
Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	16	V
Forward current	I_F	20	mA
Operating temperature range	T_{op}	-55 ... 150	°C
Storage temperature	T_{stg}	-55 ... 150	

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current	I_R				nA
V_R = 15 V		-	-	3	
V_R = 15 V, T_A = 85 °C		-	-	100	
AC Characteristics					
Diode capacitance	C_T				pF
V_R = 1 V, f = 1 MHz		17.5	18.6	19.6	
V_R = 2 V, f = 1 MHz		14	15	16	
V_R = 3 V, f = 1 MHz		11.6	12.6	13.6	
V_R = 4 V, f = 1 MHz		10	11	12	
V_R = 10 V, f = 1 MHz		5.5	6	6.5	
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

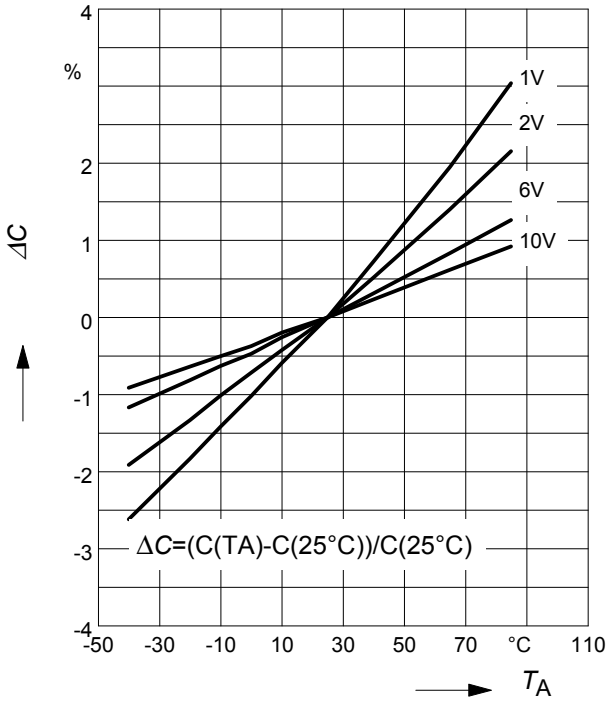
Diode capacitance $C_T = f(V_R)$

f = 1MHz



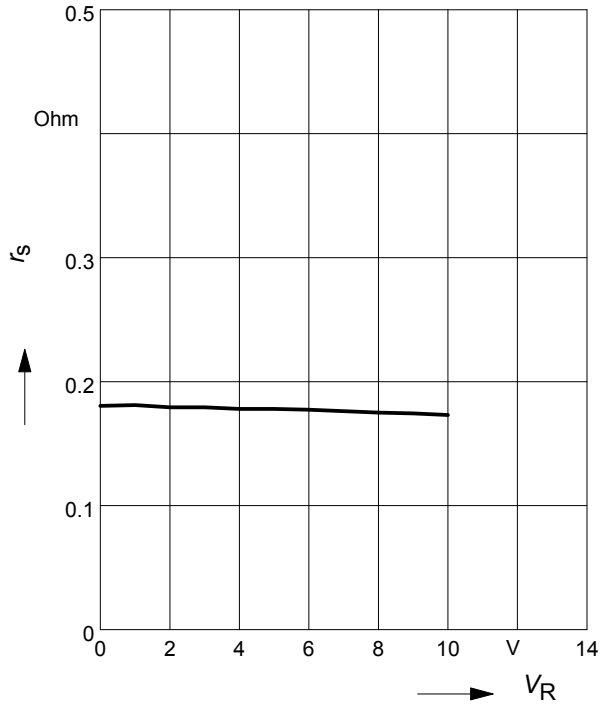
Capacitance change $\Delta C = f(T_A)$

f = 1 MHz



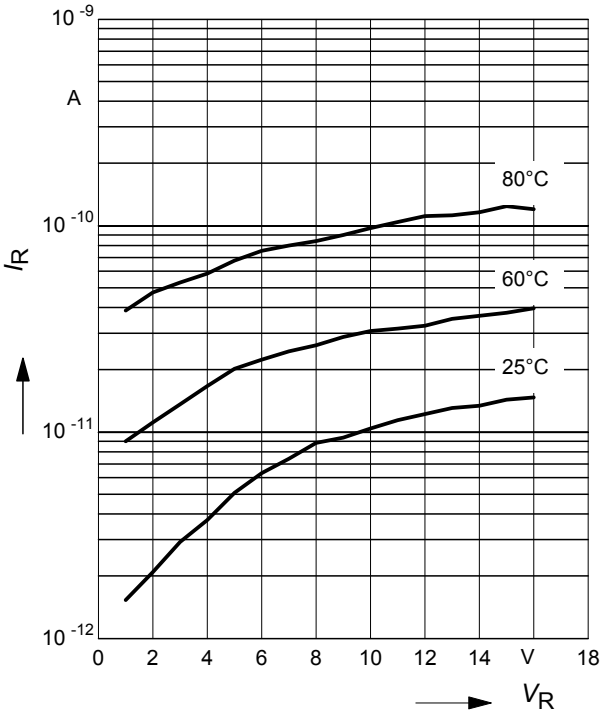
Series resistance $r_S = f(V_R)$

f = 470 MHz

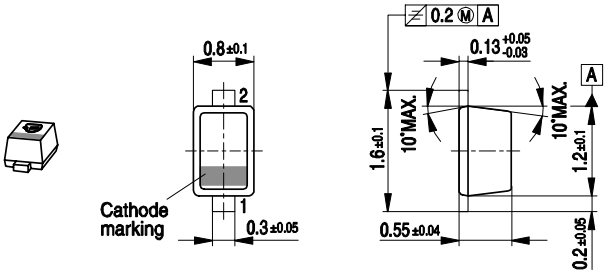


Reverse current $I_R = f(V_R)$

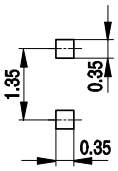
T_A = Parameter



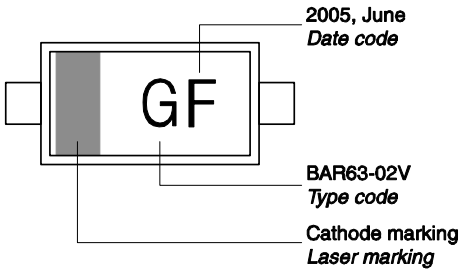
Package Outline



Foot Print

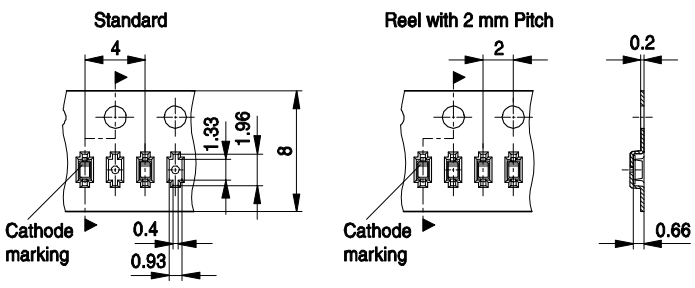


Marking Layout (Example)

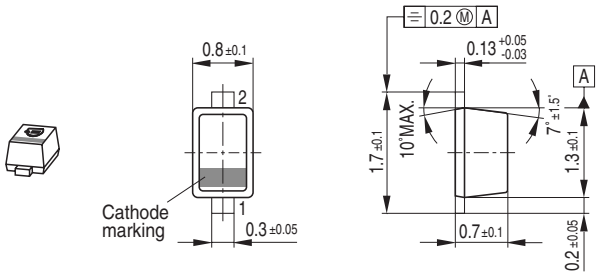


Standard Packing

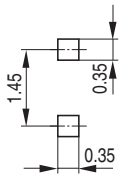
Reel ø180 mm = 3.000 Pieces/Reel
Reel ø180 mm = 8.000 Pieces/Reel (2 mm Pitch)
Reel ø330 mm = 10.000 Pieces/Reel



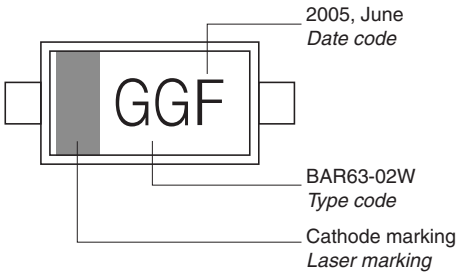
Package Outline



Foot Print

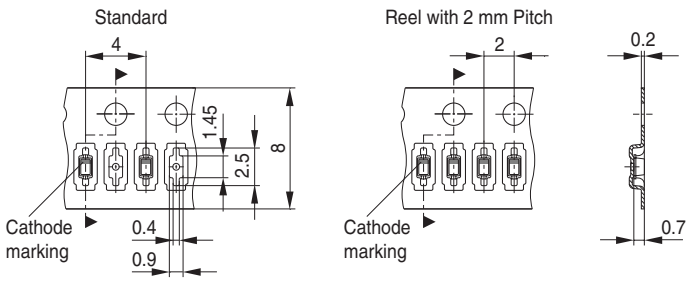


Marking Layout (Example)



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

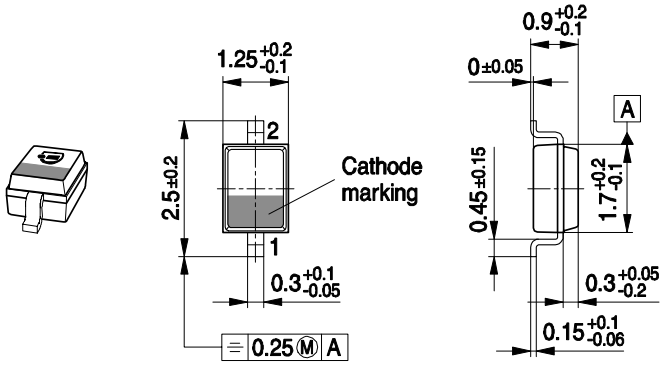


Date Code marking for discrete packages with one digit (SCD80, SC79, SC75[1]) CES-Code

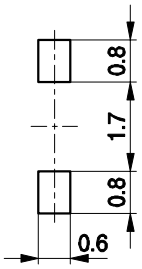
Month	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
01	a	p	A	P	a	p	A	P	a	p	A	P
02	b	q	B	Q	b	q	B	Q	b	q	B	Q
03	c	r	C	R	c	r	C	R	c	r	C	R
04	d	s	D	S	d	s	D	S	d	s	D	S
05	e	t	E	T	e	t	E	T	e	t	E	T
06	f	u	F	U	f	u	F	U	f	u	F	U
07	g	v	G	V	g	v	G	V	g	v	G	V
08	h	x	H	X	h	x	H	X	h	x	H	X
09	j	y	J	Y	j	y	J	Y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

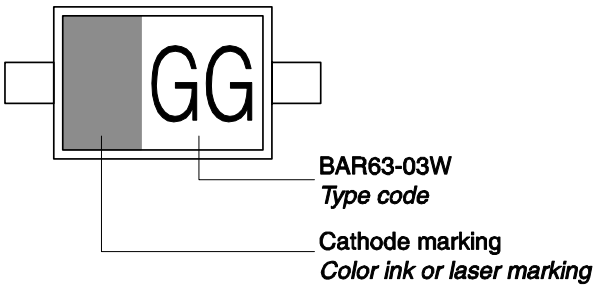
Package Outline



Foot Print

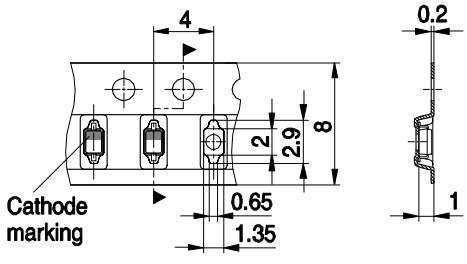


Marking Layout (Example)



Standard Packing

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



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