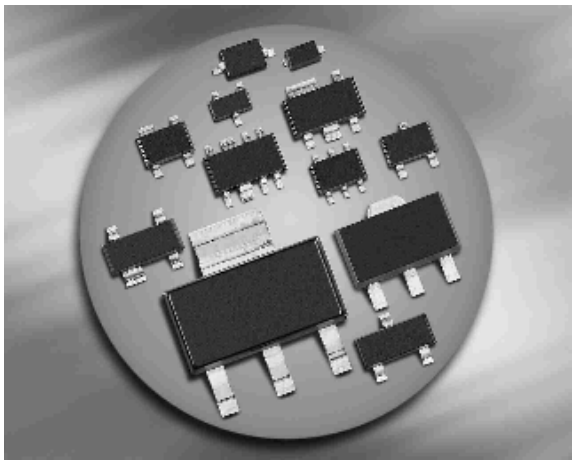
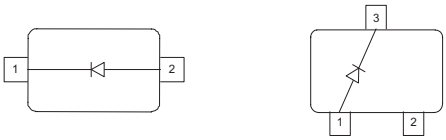
Silicon PIN Diode

- Current-controlled RF resistor for switching and attenuating applications
- Frequency range 1 MHz ... 2 GHz
- Especially useful as antenna switch in TV-sat tuners
- Very low harmonics
- Pb-free (RoHS compliant) package
- Qualified according AEC Q101



AEC Qualified RoHS

BA595 **BA885**
BA895



Type	Package	Configuration	L_S(nH)	Marking
BA595	SOD323	single	1.8	white R
BA885	SOT23	single	1.8	PA
BA895	SCD80	single	0.8	RA

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	50	V
Forward current	I_F	50	mA
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	-55 ... 125	
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point[1)]	R_{thJS}		K/W
BA595, BA885		≤ 370	
BA895		≤ 95	

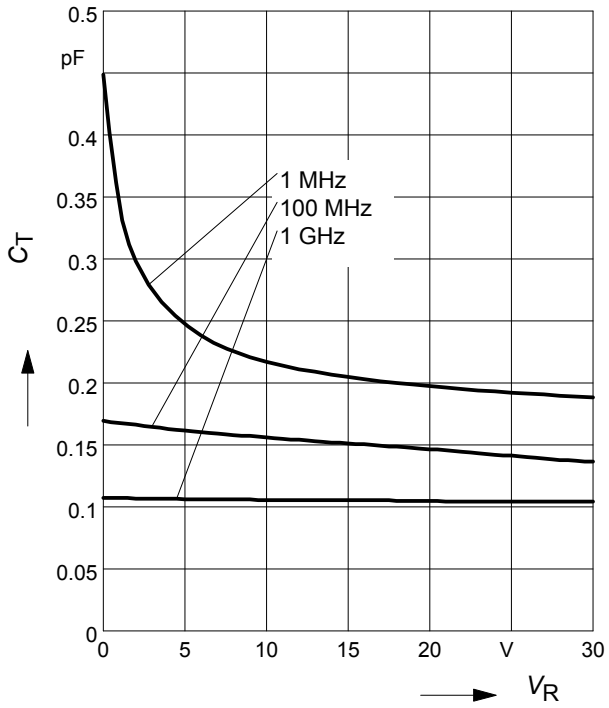
[1]For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current V_R = 30 V	I_R	-	-	20	nA
Forward voltage I_F = 50 mA	V_F	-	-	1.1	V
AC Characteristics					
Diode capacitance V_R = 0 V, f = 100 MHz V_R = 10 V, f = 1 MHz	C_T	 - -	 0.26 0.22	 0.4 0.6	pF
Reverse parallel resistance V_R = 1 V, f = 100 MHz V_R = 0 V, f = 1 GHz	R_P	 - -	 50 10	 - -	kΩ
Forward resistance I_F = 1.5 mA, f = 100 MHz I_F = 10 mA, f = 100 MHz	r_f	 - -	 22 4.5	 40 7	Ω
Charge carrier life time I_F = 10 mA, I_R = 6 mA, measured at I_R = 3 mA , R_L = 100 Ω	τ_{rr}	-	1600	-	ns
I-region width	W_I	-	130	-	µm

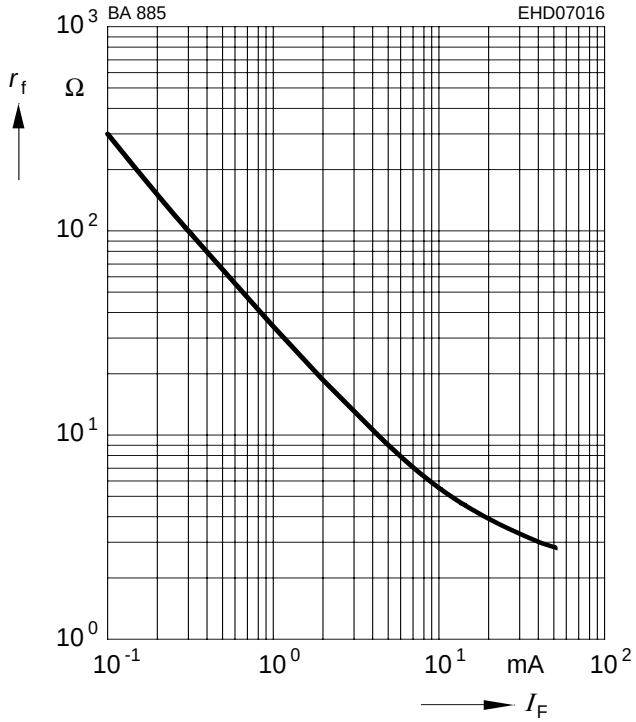
Diode capacitance $C_T = f(V_R)$

f = Parameter



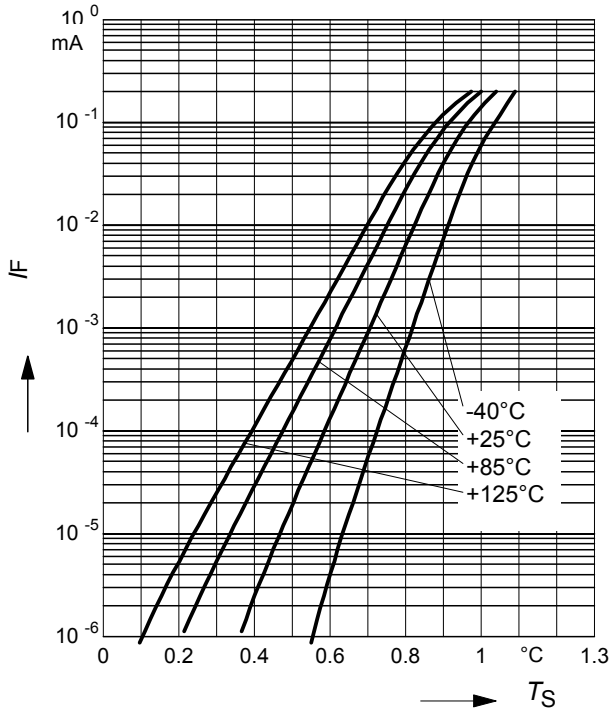
Forward resistance $r_f = f(I_F)$

f = Parameter



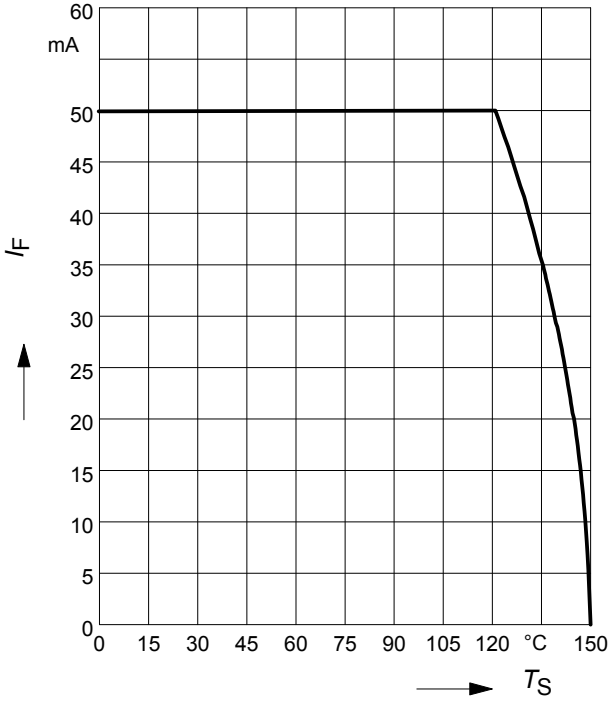
Forward current $I_F = f(V_F)$

T_A = Parameter



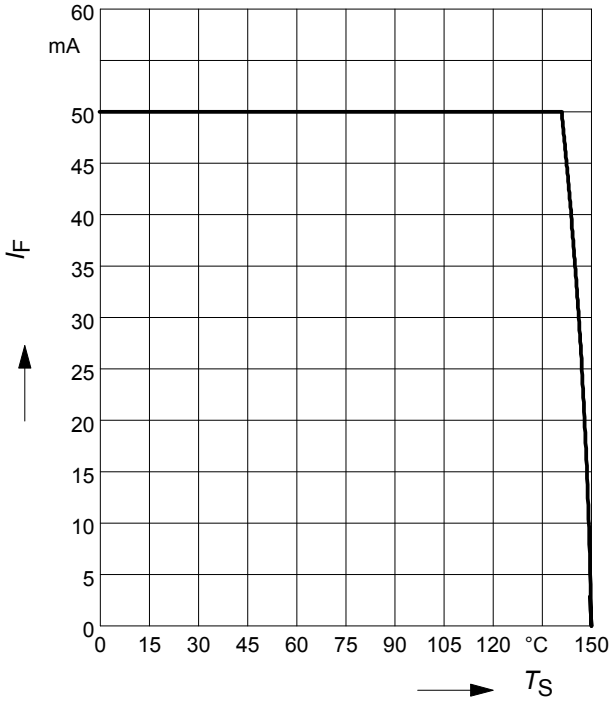
Forward current $I_F = f(T_S)$

BA595



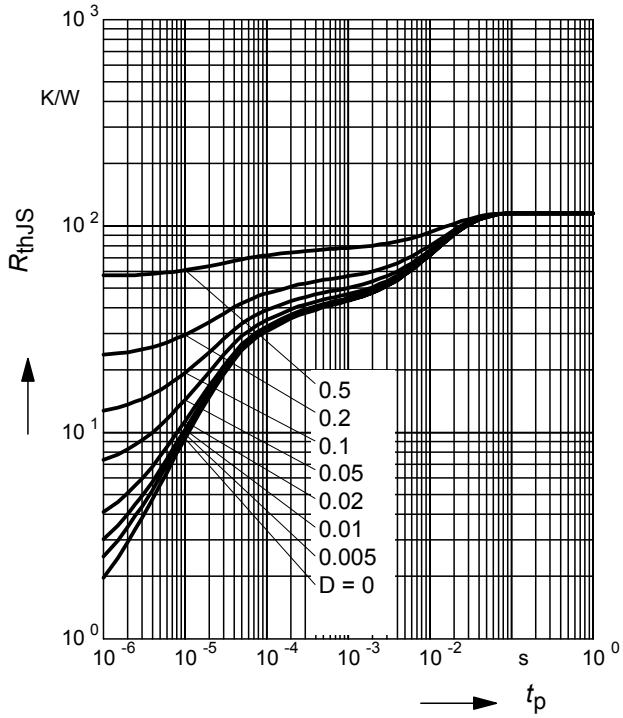
Forward current $I_F = f(T_S)$

BA895



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

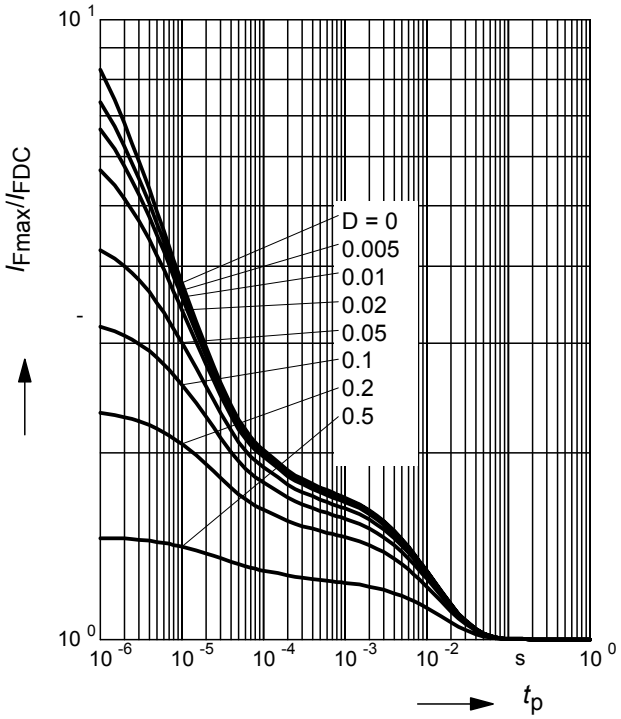
BA595



Permissible Pulse Load

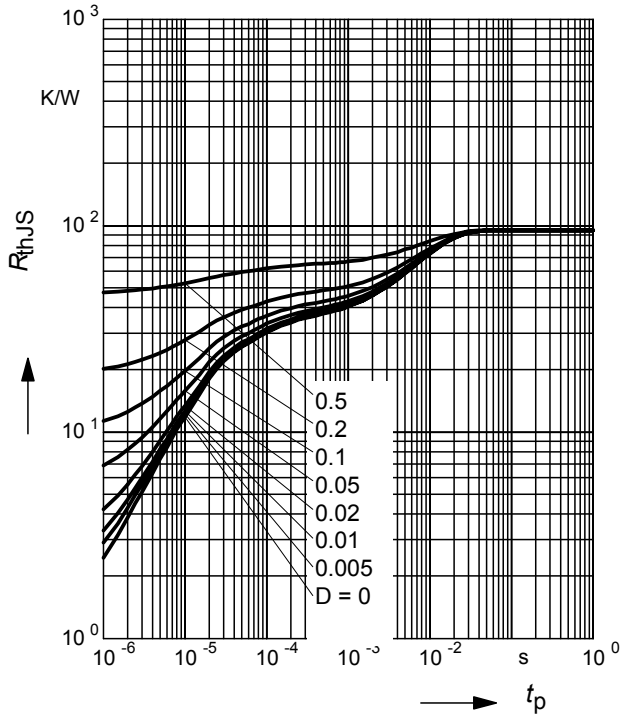
$I_{Fmax}/I_{FDC} = f(t_p)$

BA595



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

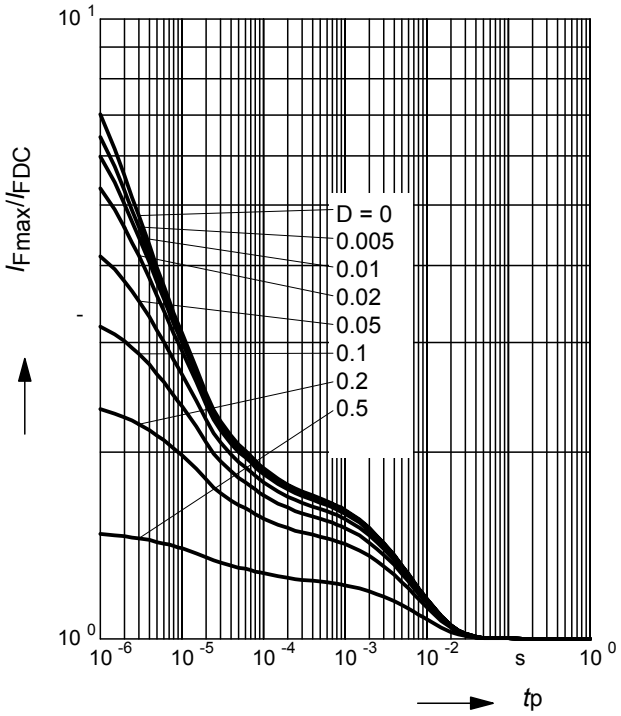
BA595



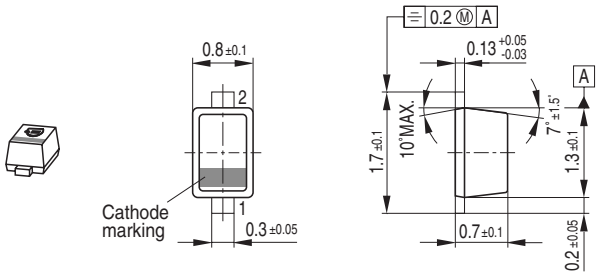
Permissible Pulse Load

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

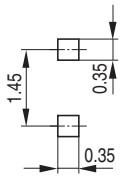
BA895



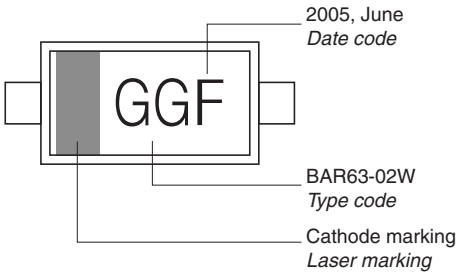
Package Outline



Foot Print

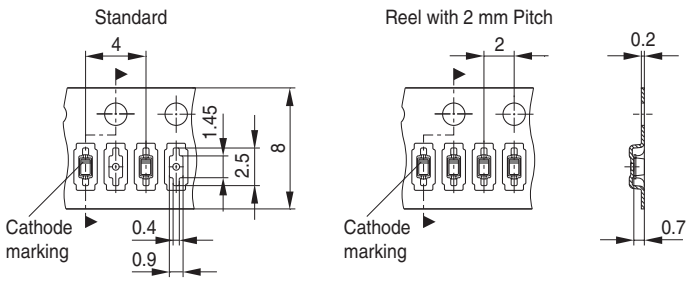


Marking Layout (Example)



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

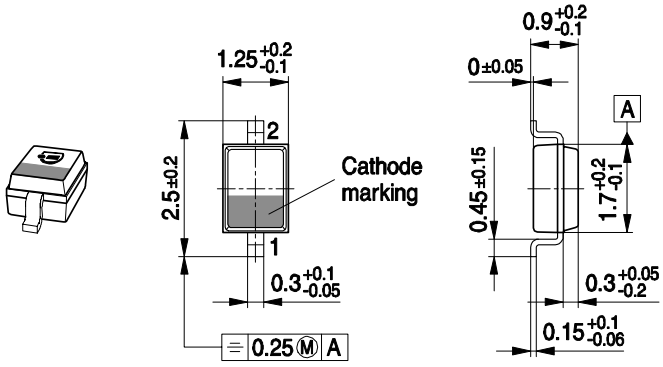


Date Code marking for discrete packages with one digit (SCD80, SC79, SC75[1)]) CES-Code

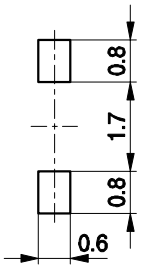
Month	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
01	a	p	A	P	a	p	A	P	a	p	A	P
02	b	q	B	Q	b	q	B	Q	b	q	B	Q
03	c	r	C	R	c	r	C	R	c	r	C	R
04	d	s	D	S	d	s	D	S	d	s	D	S
05	e	t	E	T	e	t	E	T	e	t	E	T
06	f	u	F	U	f	u	F	U	f	u	F	U
07	g	v	G	V	g	v	G	V	g	v	G	V
08	h	x	H	X	h	x	H	X	h	x	H	X
09	j	y	J	Y	j	y	J	Y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

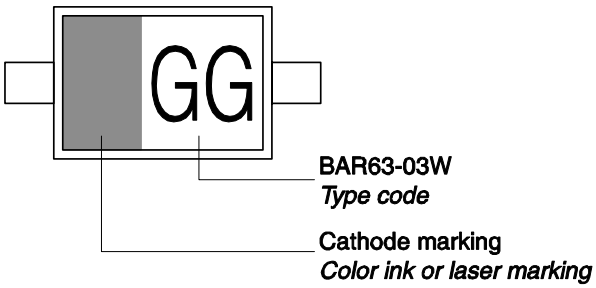
Package Outline



Foot Print

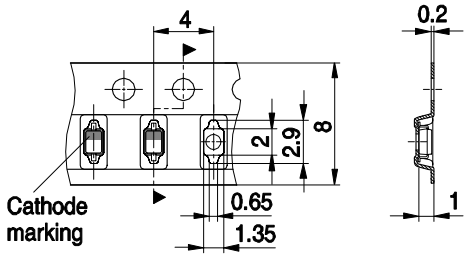


Marking Layout (Example)



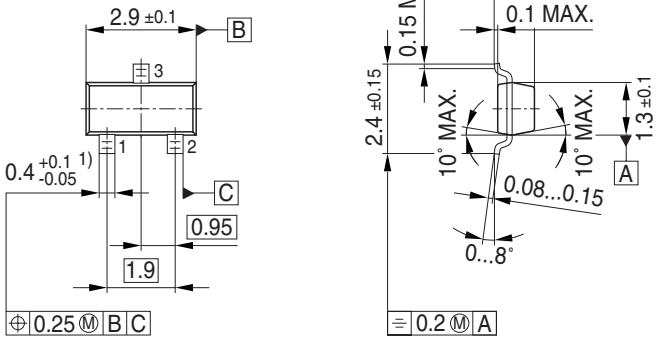
Standard Packing

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



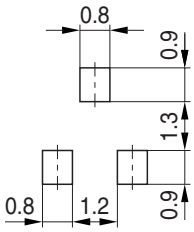
Package Outline



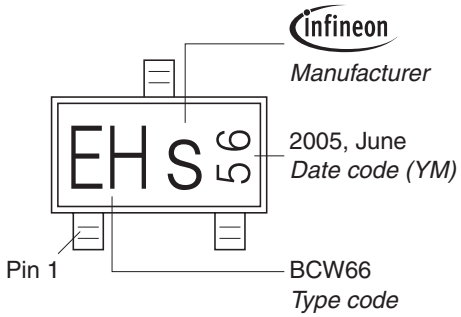


1) Lead width can be 0.6 max. in dambar area

Foot Print

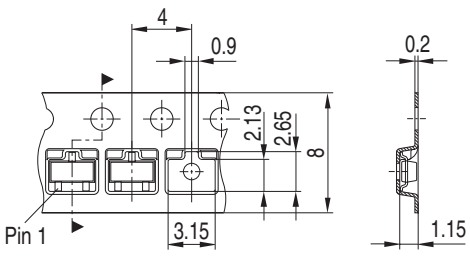


Marking Layout (Example)



Standard Packing

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



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