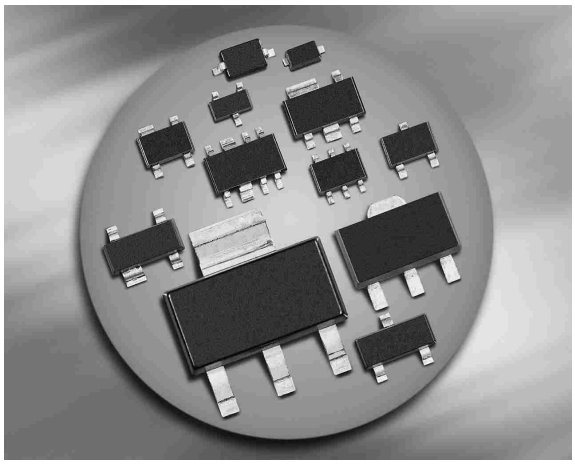
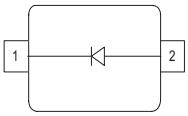
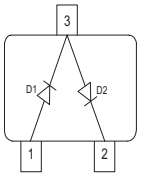
Silicon PIN Diode

- For low loss RF switches and attenuators
- Very low capacitance at zero volt reverse bias at frequencies above 1 GHz (typ. 0.25 pF)
- Low forward resistance (typ. 1.5 Ω @ 5mA)
- Low harmonics
- Pb-free (RoHS compliant) package



BAR67-02V **BAR67-04**





Type	Package	Configuration	L_S(nH)	Marking
BAR67-02V	SC79	single	0.6	T
BAR67-04	SOT23	series	1.8	PMs

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	150	V
Forward current	I_F	200	mA
Total power dissipation	P_{tot}		mW
T_S ≤ 118°C, BAR67-02V		250	
T_S ≤ 25°C, BAR67-04		250	
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
BAR67-02V		≤ 115	
BAR67-04		≤ 290	

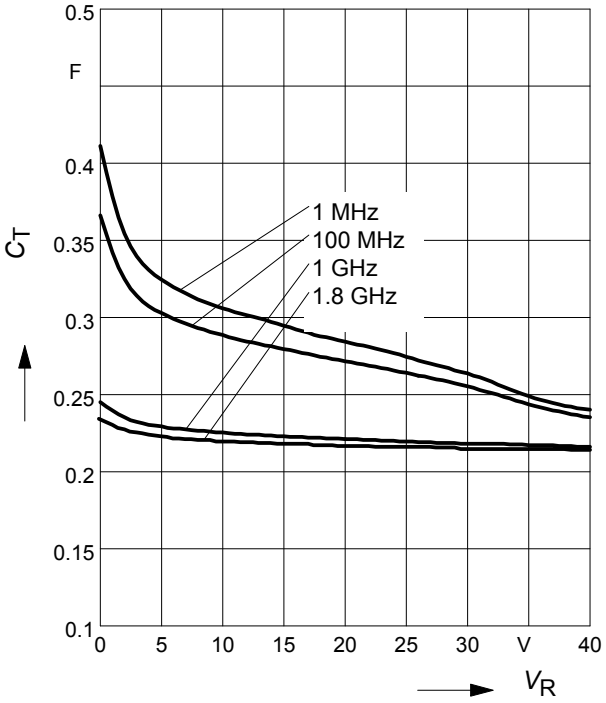
[1]For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)}$ = 5 µA	$V_{(BR)}$	150	-	-	V
Reverse current V_R = 100 V	I_R	-	-	20	nA
Forward voltage I_F = 50 mA	V_F	-	0.95	1.2	V
AC Characteristics					
Diode capacitance	C_T				pF
V_R = 5 V, f = 1 MHz		-	0.35	0.55	
V_R = 0 V, f = 100 MHz		-	0.35	0.9	
V_R = 0 V, f = 1 GHz		-	0.25	-	
V_R = 0 V, f = 1.8 GHz		-	0.23	-	
Reverse parallel resistance	R_P				kΩ
V_R = 0 V, f = 100 MHz		-	25	-	
V_R = 0 V, f = 1 GHz		-	4	-	
V_R = 0 V, f = 1.8 GHz		-	2.5	-	
Forward resistance	r_f				Ω
I_F = 5 mA, f = 100 MHz		-	1.5	1.8	
I_F = 10 mA, f = 100 MHz		-	1	-	
Charge carrier life time I_F = 10 mA, I_R = 6 mA, measured at I_R = 3 mA, R_L = 100 Ω	τ_{rr}	-	700	-	ns
I-region width	W_I	-	13	-	µm

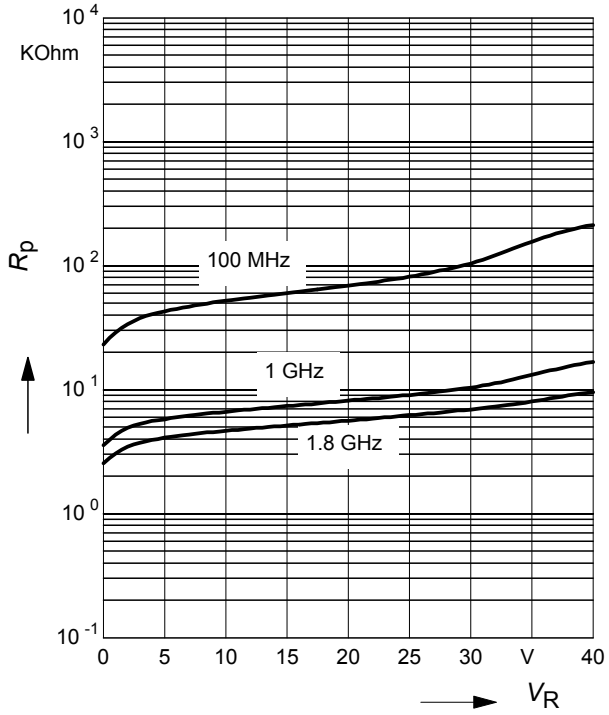
Diode capacitance $C_T = f(V_R)$

f = Parameter



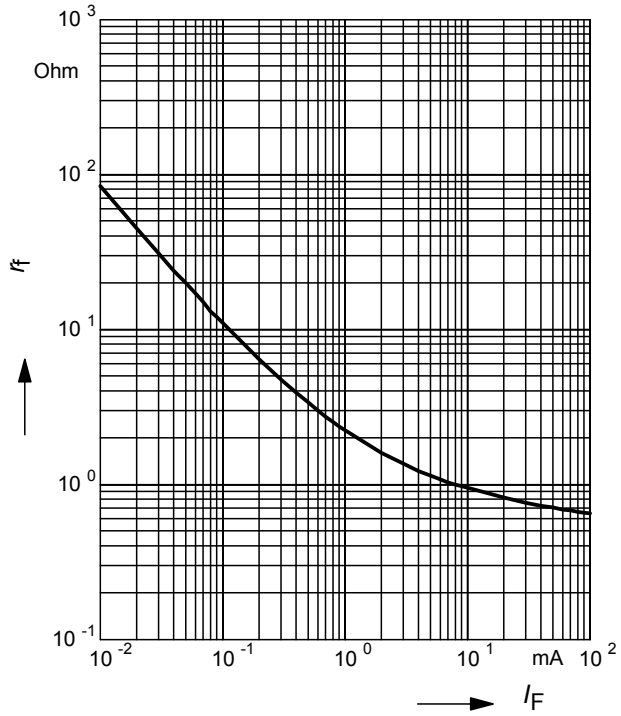
Reverse parallel resistance $R_P = f(V_R)$

f = Parameter



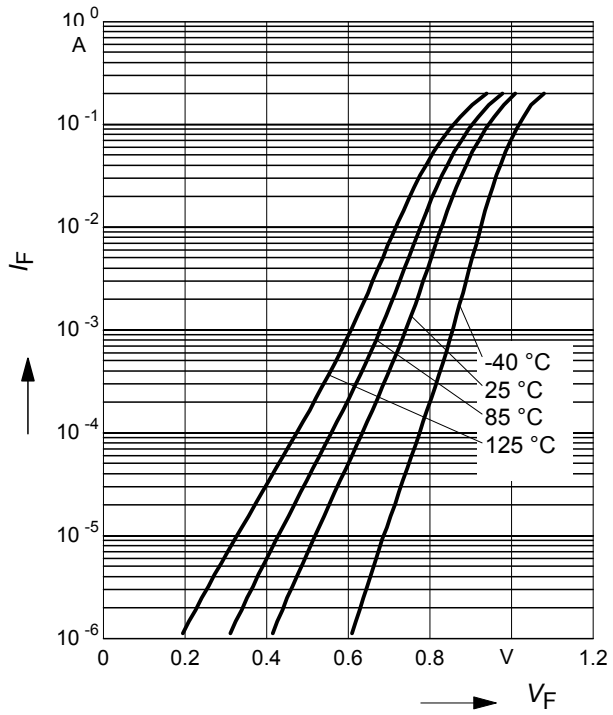
Forward resistance $r_f = f(I_F)$

f = 100MHz



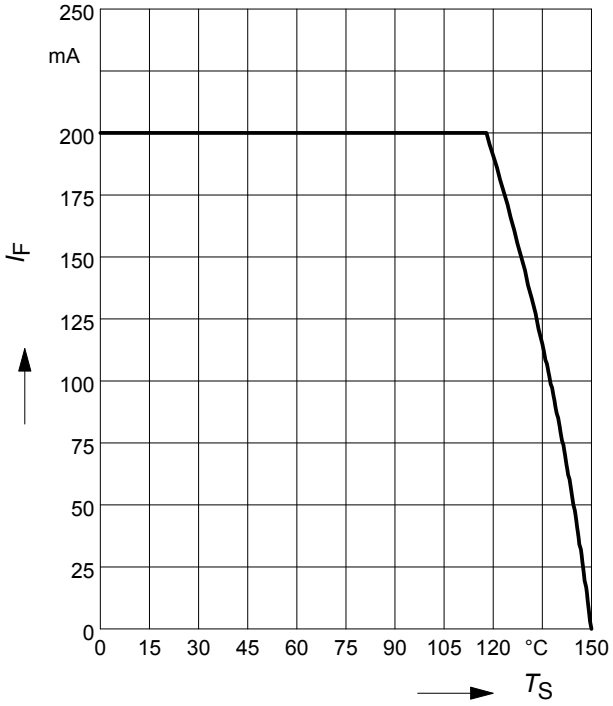
Forward current $I_F = f(V_F)$

T_A = Parameter



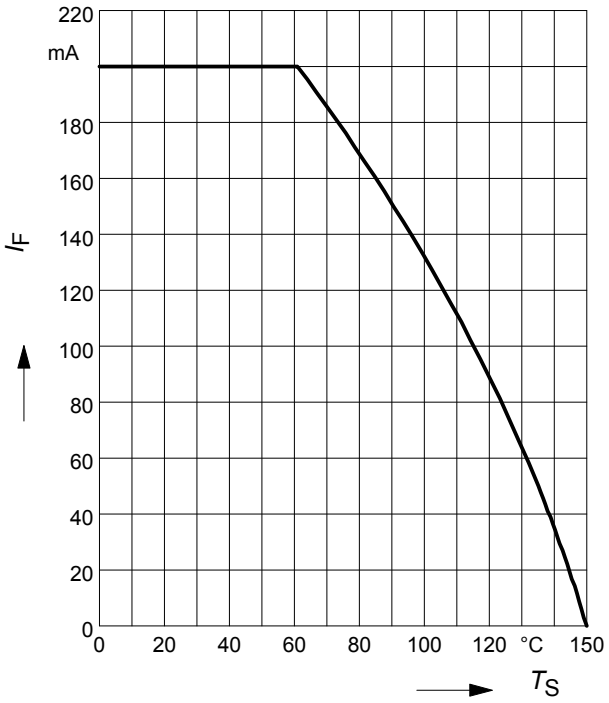
Forward current $I_F = f(T_S)$

BAR67-02V



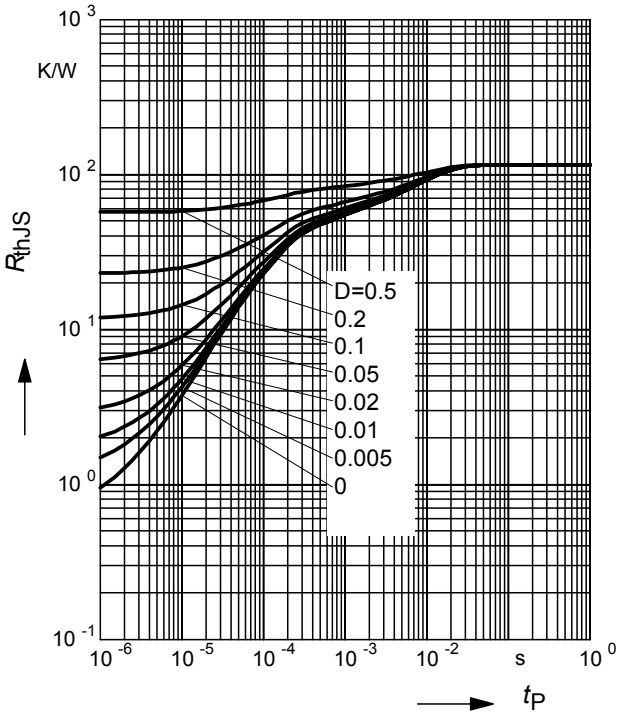
Forward current $I_F = f(T_S)$

BAR67-04



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

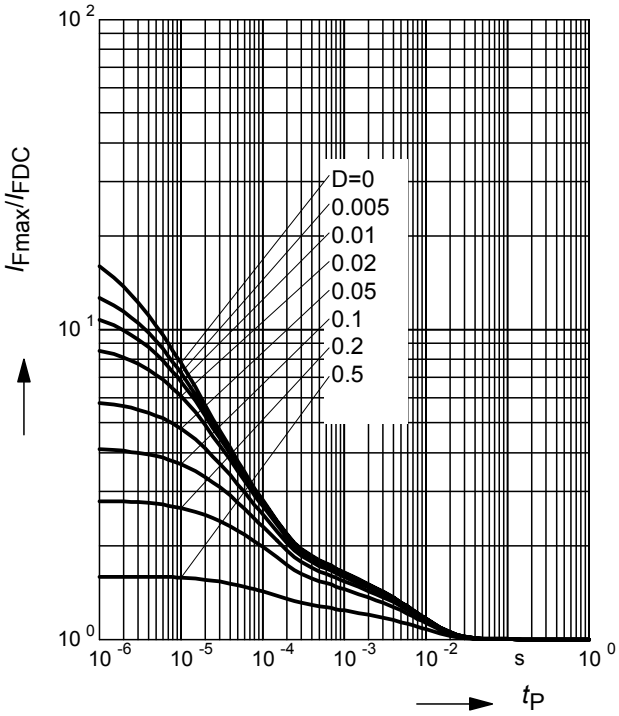
BAR67-02V



Permissible Pulse Load

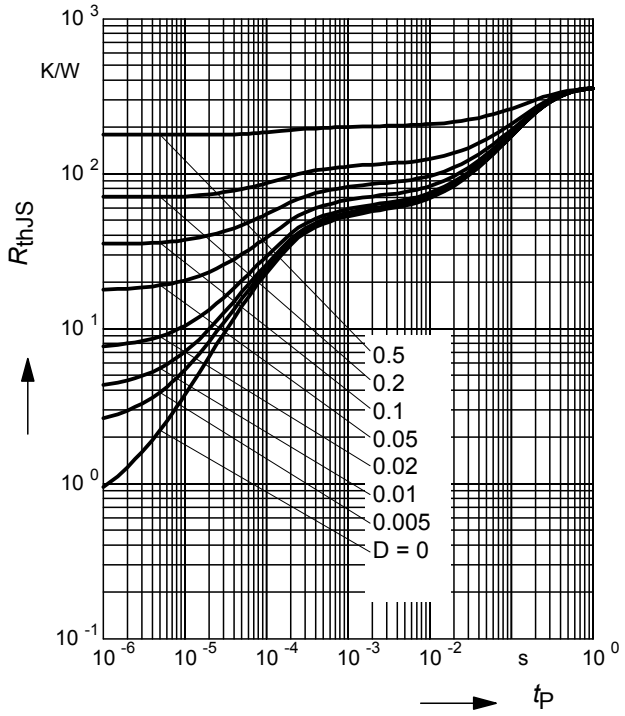
$I_{Fmax}/ I_{FDC} = f(t_p)$

BAR67-02V

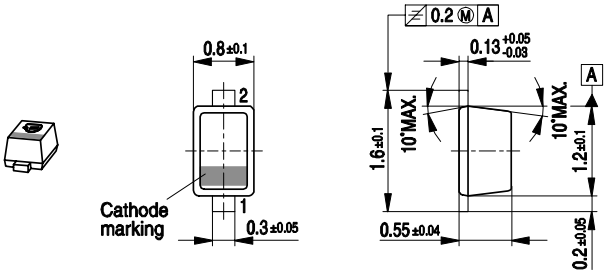


Permissible Puls Load $R_{thJS} = f(t_p)$

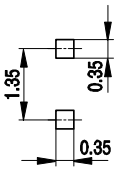
BAR67-04



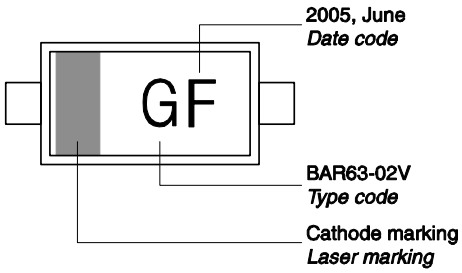
Package Outline



Foot Print

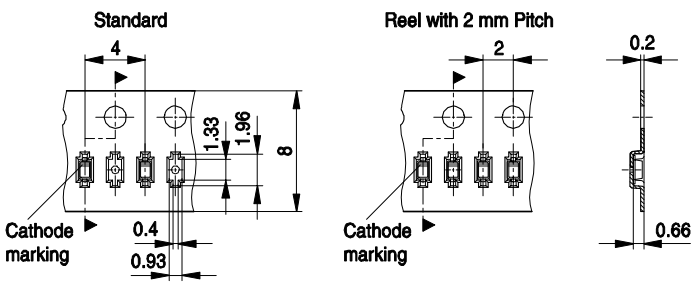


Marking Layout (Example)



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

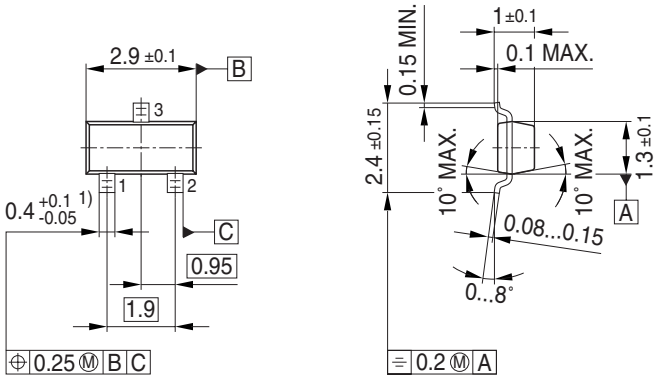


Date Code marking for discrete packages with one digit (SCD80, SC79, SC75[1)]) CES-Code

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

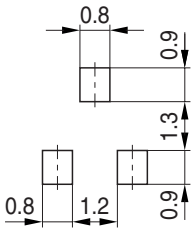
1) New Marking Layout for SC75, implemented at October 2005.

Package Outline

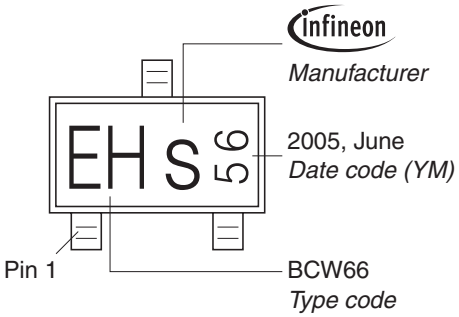


1) Lead width can be 0.6 max. in dambar area

Foot Print



Marking Layout (Example)



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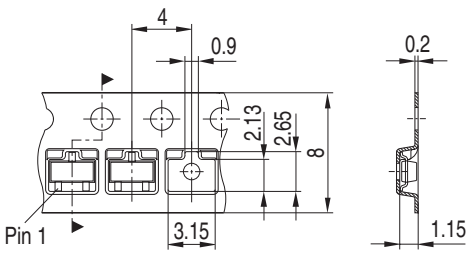
Reel ø330 mm = 10.000 Pieces/Reel



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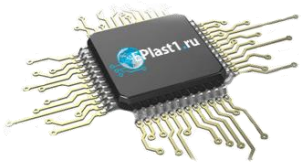
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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