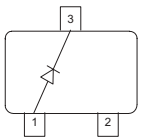


Silicon PIN Diode

- 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) package¹⁾
- Qualified according AEC Q101


BA779


Type	Package	Configuration	L_S (nH)	Marking
BA779	SOT 23	single	1.8	PA

Maximum Ratings at $T_A = 25^\circ\text{C}$, 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 ²⁾	R_{thJS}	≤ 370	K/W

¹Pb-containing package may be available upon special request

²For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

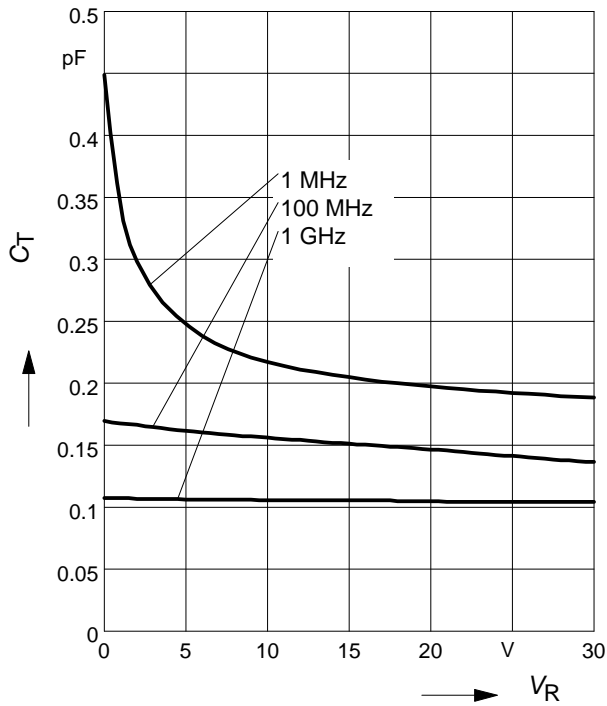
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Reverse current $V_R = 30\text{ V}$	I_R	-	-	20	nA
Forward voltage $I_F = 50\text{ mA}$	V_F	-	-	1.1	V

AC Characteristics

Diode capacitance $V_R = 0\text{ V}, f = 100\text{ MHz}$ $V_R = 10\text{ V}, f = 1\text{ MHz}$	C_T	- -	0.26 0.22	0.4 0.6	pF
Reverse parallel resistance $V_R = 1\text{ V}, f = 100\text{ MHz}$ $V_R = 0\text{ V}, f = 1\text{ GHz}$	R_P	- -	50 10	- -	k Ω
Forward resistance $I_F = 1.5\text{ mA}, f = 100\text{ MHz}$ $I_F = 10\text{ mA}, f = 100\text{ MHz}$	r_f	- -	22 4.5	40 7	Ω
Charge carrier life time $I_F = 10\text{ mA}, I_R = 6\text{ mA}$, measured at $I_R = 3\text{ mA}$, $R_L = 100\ \Omega$	τ_{rr}	-	1600	-	nS
I-region width	W_I	-	130	-	μm

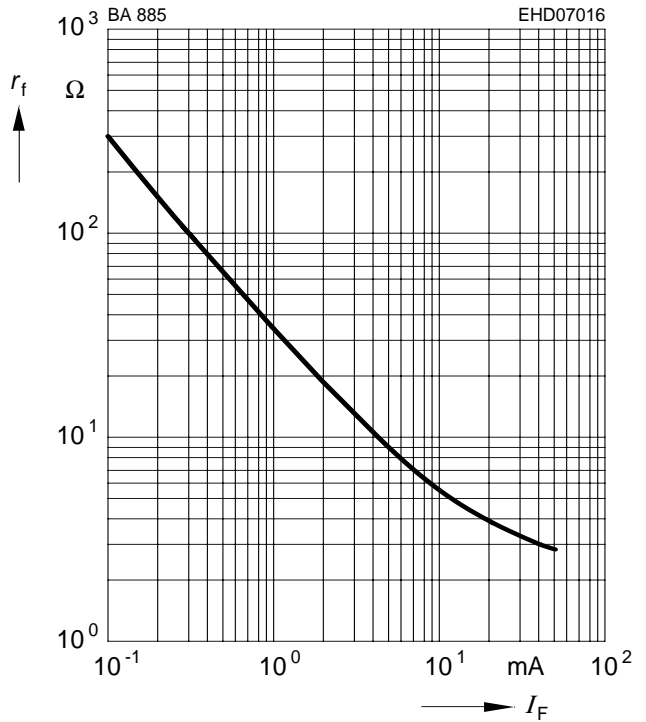
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

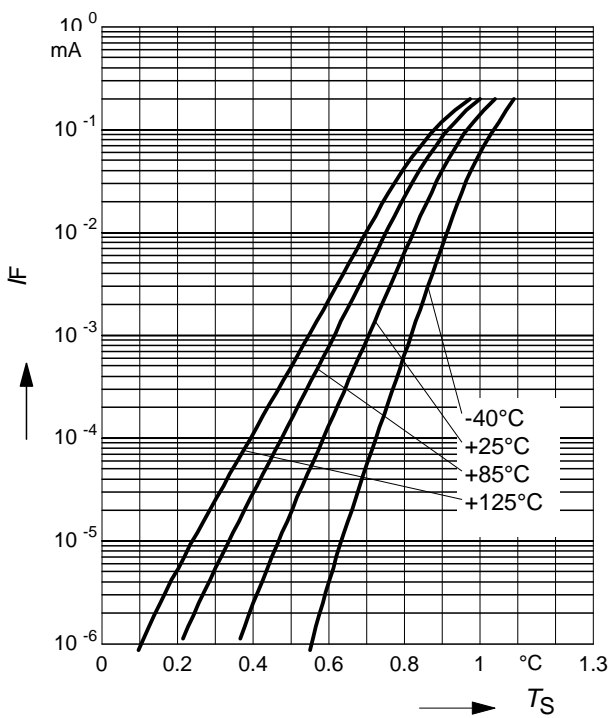


Forward resistance $r_f = f(I_F)$

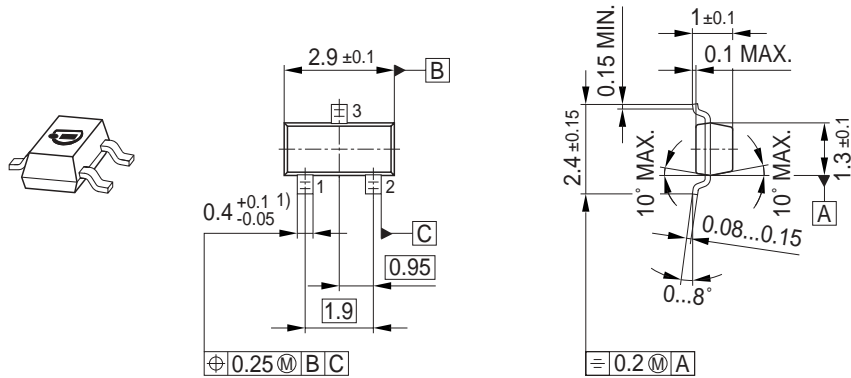
$f = 1\text{MHz}$



Forward current $I_F = f(V_F)$

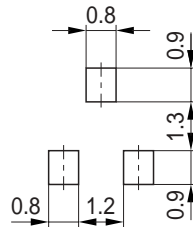


Package Outline

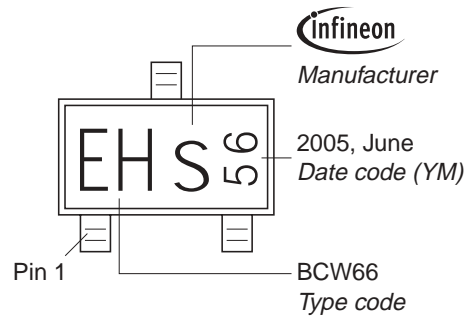


1) Lead width can be 0.6 max. in dambar area

Foot Print

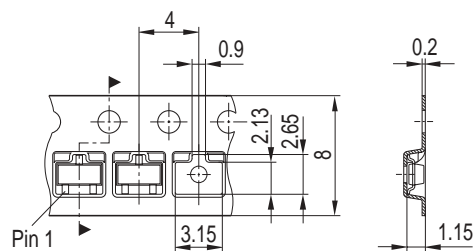


Marking Layout (Example)



Standard Packing

Reel \varnothing 180 mm = 3.000 Pieces/Reel
 Reel \varnothing 330 mm = 10.000 Pieces/Reel



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