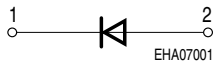
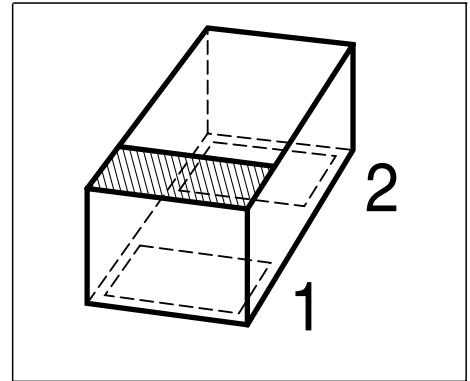


Silicon PIN Diode

Preliminary data

- PIN diode for high speed switching of RF signals
- Very low forward resistance (low insertion loss)
- Very low capacitance (high isolation)
- small inductance
- For frequencies up to 3GHz
- Ultra small leadless package



Type	Marking	Pin Configuration			Package
BAR 63-02L	G	1 = C	2 = A	-	TSLP-2

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	50	V
Forward current	I_F	100	mA
Total power dissipation $T_S = \text{tbd}$	P_{tot}	tbd	mW
Operating temperature range	T_{op}	-55 ... 125	°C
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - ambient ¹⁾	R_{thJA}	tbd	K/W
Junction - soldering point	R_{thJS}	tbd	

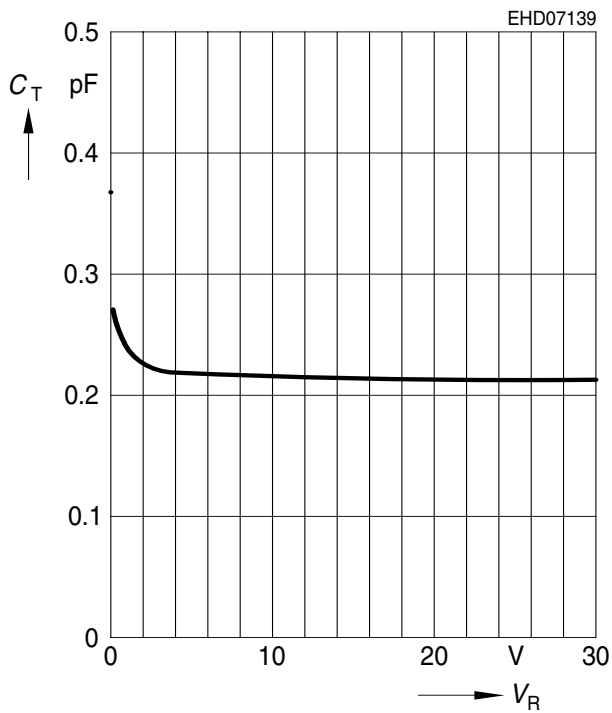
¹⁾Package mounted on alumina 15mm x 16.7mm x 0.7mm

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 5\text{ }\mu\text{A}$	$V_{(BR)}$	50	-	-	V
Reverse current $V_R = 35\text{ V}$	I_R	-	-	10	nA
Forward voltage $I_F = 100\text{ mA}$	V_F	-	0.95	1.2	V
AC Characteristics					
Diode capacitance $V_R = 0\text{ V}$, $f = 100\text{ MHz}$ $V_R = 5\text{ V}$, $f = 1\text{ MHz}$	C_T	- -	0.3 0.21	- 0.3	pF
Forward resistance $I_F = 5\text{ mA}$, $f = 100\text{ MHz}$ $I_F = 10\text{ mA}$, $f = 100\text{ MHz}$	r_f	- -	1.2 1	2 -	Ω
Charge carrier life time $I_F = 10\text{ mA}$, $I_R = 6\text{ mA}$, $I_R = 3\text{ mA}$	τ_{rr}	-	75	-	ns
Case capacitance $f = 1\text{ MHz}$	C_C	-	0.05	-	pF
Series inductance	L_S	-	0.6	-	nH

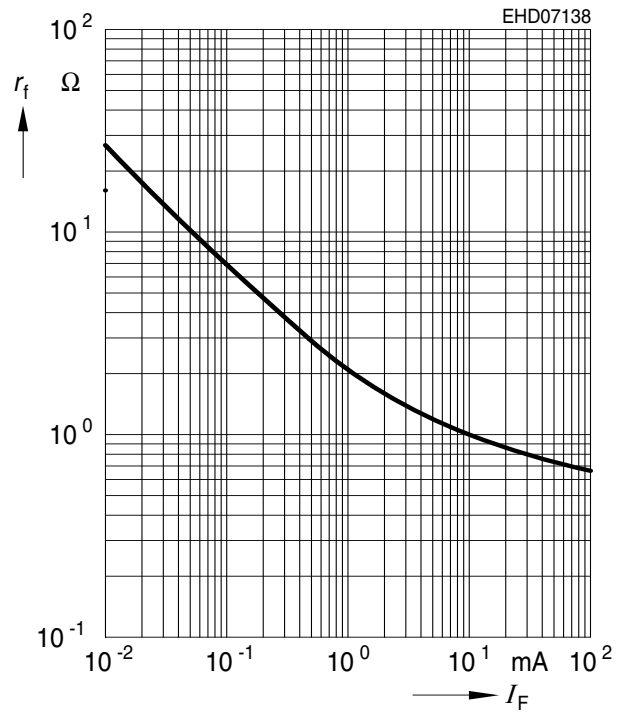
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



Forward resistance $r_f = f(I_F)$

$f = 100\text{MHz}$



Forward current $I_F = f(V_F)$

$T_A = 25^\circ\text{C}$

