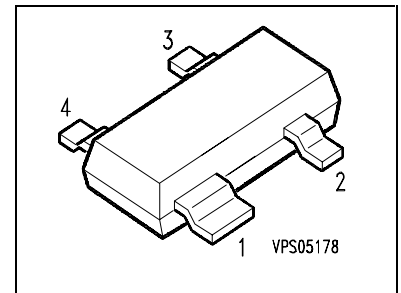


## Silicon PIN Diode

- High voltage current controlled  
RF resistor for RF attenuator and switches
- Frequency range above 1 MHz
- Low resistance and short carrier lifetime
- For frequencies up to 3 GHz



Type	Marking	Ordering Code (tape and reel)	Pin Configuration				Package <sup>1)</sup>
			1	2	3	4	
BAR64-07	PTs	Q62702-A1044	C1	C2	A2	A1	SOT-143

### Maximum Ratings per Diode

Parameter	Symbol	BAR 64-07	Unit
Reverse voltage	$V_R$	200	V
Forward current	$I_F$	100	mA
Total Power dissipation $T_S \leq 25^\circ\text{C}$	$P_{\text{tot}}$	250	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Operating temperature range	$T_{\text{op}}$	-55 +150 $^\circ\text{C}$	$^\circ\text{C}$
Storage temperature range	$T_{\text{stg}}$	-55...+150 $^\circ\text{C}$	$^\circ\text{C}$

### Thermal Resistance

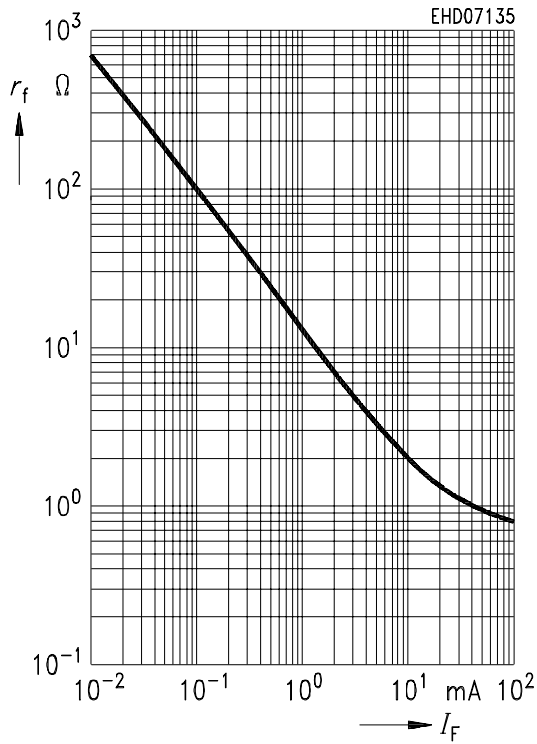
Junction-ambient <sup>1)</sup>	$R_{\text{th JA}}$	$\leq 450$	K/W
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<sup>1)</sup>Package mounted on alumina 15mm x 16.7mm x 0.7mm

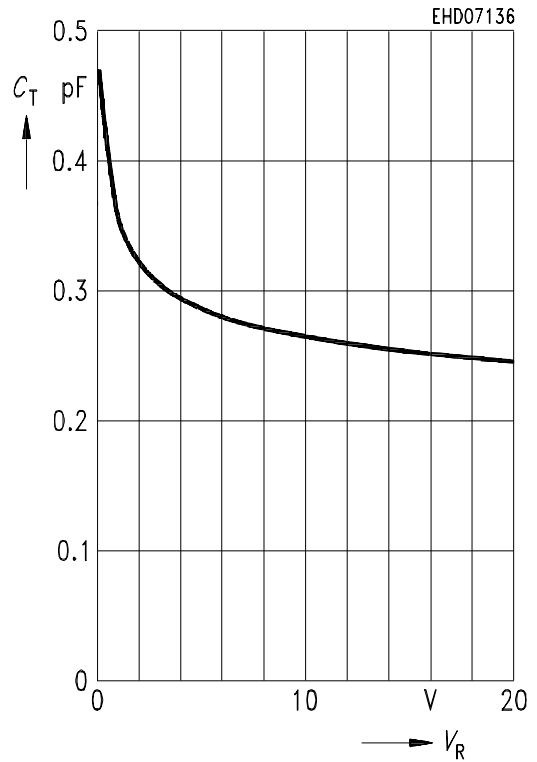
**Electrical Characteristics**at  $T_A = 25\text{ °C}$ , unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
<b>DC Characteristics per Diode</b>					
Breakdown voltage $I_R = 5\text{ }\mu\text{A}$	$V_{(BR)}$	200	-	-	V
Forward voltage $I_F = 50\text{ mA}$	$V_F$	-	-	1.1	V
Diode capacitance $V_R = 20\text{ V}$ , $f = 1\text{ MHz}$	$C_T$	-	0.23	0.35	pF
Forward resistance $I_F = 1\text{ mA}$ , $f = 100\text{ MHz}$ $I_F = 10\text{ mA}$ , $f = 100\text{ MHz}$ $I_F = 100\text{ mA}$ , $f = 100\text{ MHz}$	$r_f$	- --	12.5 2.1 0.85	20 3.8 1.35	$\Omega$
Charge carrier lifetime $I_F = 10\text{ mA}$ , $I_R = 6\text{ mA}$ , $I_R = 3\text{ mA}$	$\tau_L$	-	1.55	-	$\mu\text{s}$
Series inductance	$L_s$	-	2.0	-	nH

**Forward resistance  $r_f = f(I_F)$**   
 $f = 100 \text{ MHz}$



**Diode capacitance  $C_T = f(V_R)$**   
 $f = 1 \text{ MHz}$ .



**Forward current  $I_F = f(V_F)$**

