

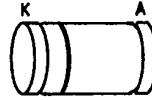
Silicon PIN Diodes

T-07-15

BA 682
... BA 683

SIEMENS AKTIENGESELLSCHAFT

- Low-loss VHF band switch for TV tuners



Type ¹⁾	Marking	Ordering code for versions in bulk	Ordering code for versions on 8 mm-tape	Package
BA 682	Cathode: black ring	-	Q62702-A723	SOD 80
BA 683		Q62702-A145	Q62702-A121	SOD 80

Maximum ratings

Parameter	Symbol	Ratings	Unit
Reverse voltage	V_R	35	
Forward current	I_F	50	
Operating temperature	T_{op}	100	°C
Storage temperature range	T_{stg}	-55... +150	°C
Thermal resistance junction-ambient package mounted on alumina 15 mm x 16.7 mm x 0.7 mm	R_{thJA}	≤400	K/W

Preliminary data

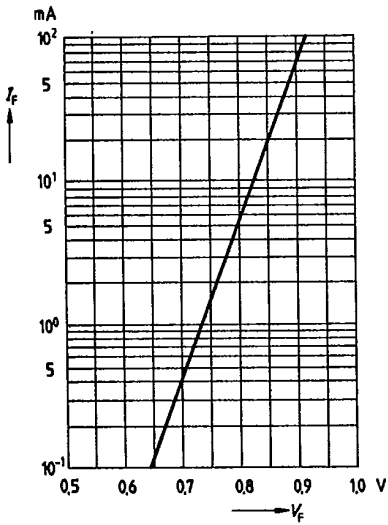
¹⁾ The type designation is marked on the package label.

Electrical characteristics

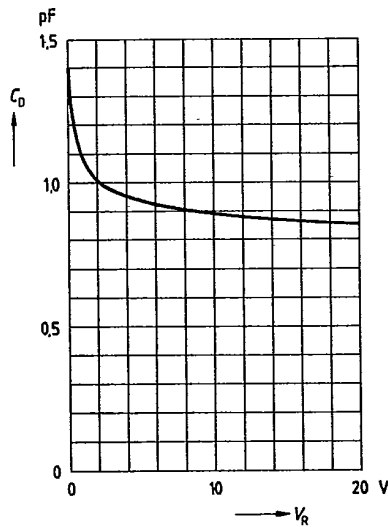
at $T_A = 25^\circ\text{C}$, unless otherwise specified

	Symbol	min	typ	max	Unit
Forward voltage $I_F = 50\text{ mA}$	V_F	-	-	1	V
Reverse current $V_R = 20\text{ V}$	I_R	-	-	50	nA
Diode capacitance $V_R = 1\text{ V}, f = 1\text{ MHz}, \text{BA } 682, \text{BA } 683$ $V_R = 3\text{ V}, f = 1\text{ MHz}, \text{BA } 682$ $\text{BA } 683$	C_{Df}	-	-	1,5 1,2 1	pF pF pF
Forward resistance $I_F = 3\text{ mA}, f \geq 100\text{ MHz}, \text{BA } 682$ $\text{BA } 683$ $I_F = 10\text{ mA}, f \geq 100\text{ MHz}, \text{BA } 682$ $\text{BA } 683$	r_f	-	-	0,7 1,2 0,5 0,9	Ω Ω Ω Ω
Reverse resistance $V_R = 1\text{ V}, f = 100\text{ MHz}$	$1/g_p$	-	100	-	$k\Omega$
Series inductance	L_s	-	2	-	nH

Forward current $I_F = f(V_F)$
 $T_A = 25^\circ\text{C}$



Diode capacitance $C_D = f(V_R)$
 $f = 1\text{ MHz}$



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

