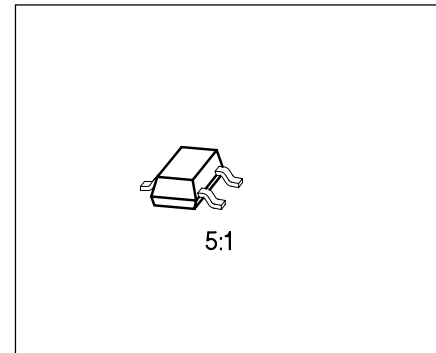


Silicon PIN Diode

BA 887

Preliminary Data

- RF switch, RF attenuator for frequencies above 10 MHz
- Very low IM distortion



Type	Ordering Code (taped)	Pin Configuration			Marking	Package
		1	2	3		
BA 887	Q62702-	A		C	PDs	SOT-23

Maximum Ratings

Parameter	Symbol	Values	Unit
Reverse voltage	V_R	50	V
Forward current	I_F	100	mA
Total power dissipation $T_S \leq 40\text{ °C}^{1)}$	P_{tot}	250	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	- 55 ... + 150	°C

Thermal Resistance

Junction-soldering point ¹⁾	$R_{th JS}$	≤ 220	K/W
Junction-ambient	$R_{th JA}$	≤ 300	K/W

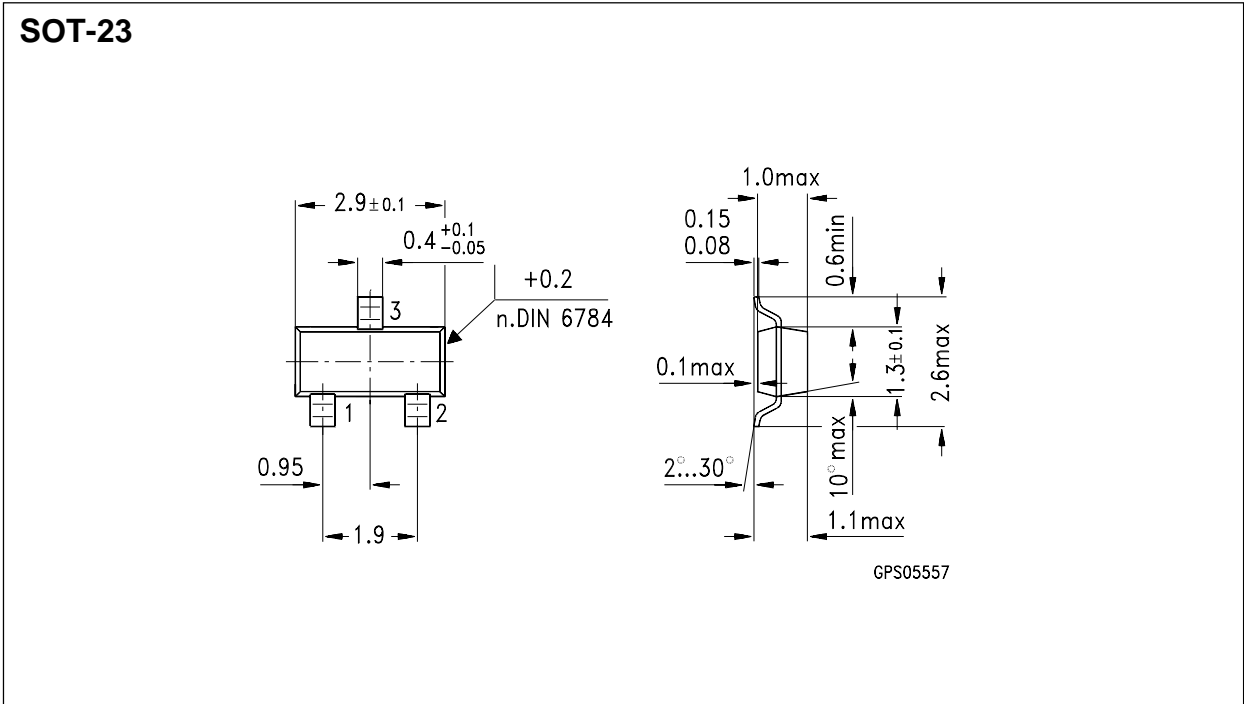
1) Package mounted on aluminum 15 mm x 16.7 mm x 0.7 mm.

Characteristics per Diode

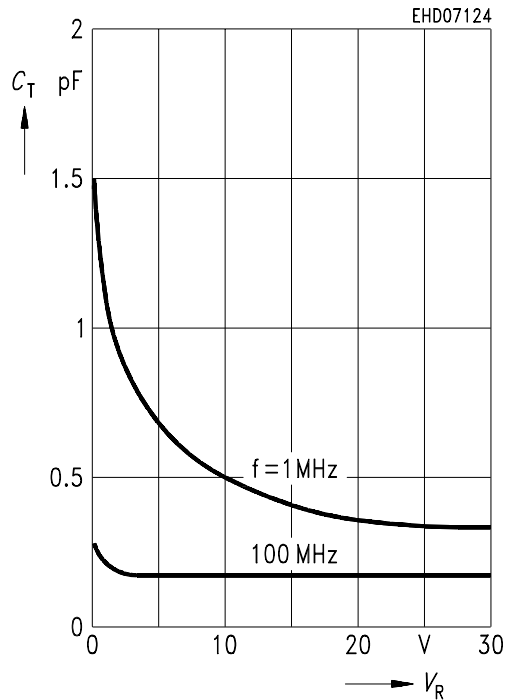
at $T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified.

Parameter	Symbol	Value			Unit
		min.	typ.	max.	
Reverse current $V_R = 30\text{ V}$	I_R	–	–	20	nA
Forward voltage $I_F = 100\text{ mA}$	V_F	–	0.9	–	V
Diode capacitance $V_R = 10\text{ V}, f = 1\text{ MHz}$ $V_R = 0\text{ V}, f = 100\text{ MHz}$	C_T	– –	0.52 0.27	– –	pF
Forward resistance $f = 100\text{ MHz}$ $I_F = 1.5\text{ mA}$ $I_F = 10\text{ mA}$	r_f	– –	22 4.2	– –	Ω
Charge carrier lifetime $I_F = 10\text{ mA}, I_R = 6\text{ mA}, I_R = 3\text{ mA}$	τ_L	–	2.5	–	μs

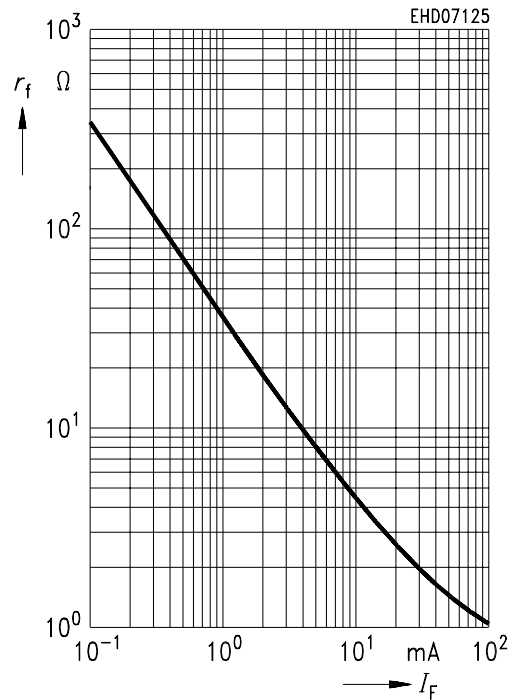
Package Outline



Diode capacitance $C_T = f(V_R)$
 $f = 1 \text{ MHz}, 100 \text{ MHz}$



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



3rd Harmonic intercept point vs forward current $f = 100 \text{ MHz}$

