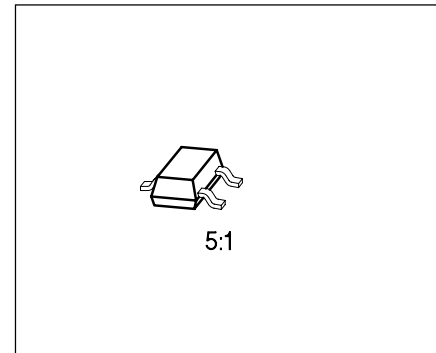


## Silicon PIN Diode

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 <sup>1)</sup>	$R_{th\ JS}$	$\leq 220$	K/W
Junction-ambient	$R_{th\ JA}$	$\leq 300$	K/W

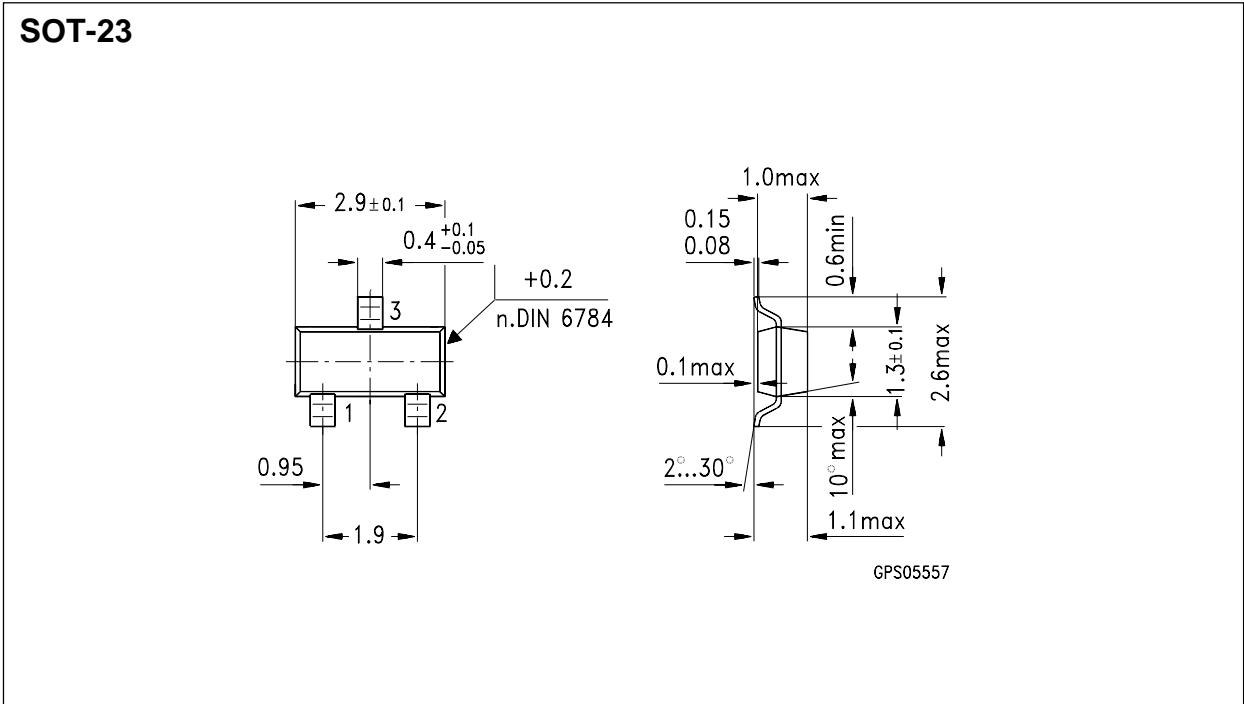
1) Package mounted on aluminum 15 mm x 16.7 mm x 0.7 mm.

**Characteristics per Diode**

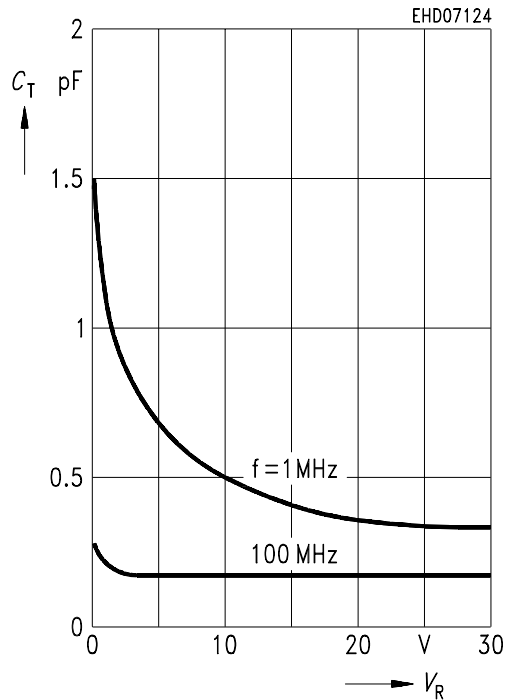
at  $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise specified.

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	– –	$\Omega$
Charge carrier lifetime $I_F = 10\text{ mA}, I_R = 6\text{ mA}, I_R = 3\text{ mA}$	$\tau_L$	–	2.5	–	$\mu\text{s}$

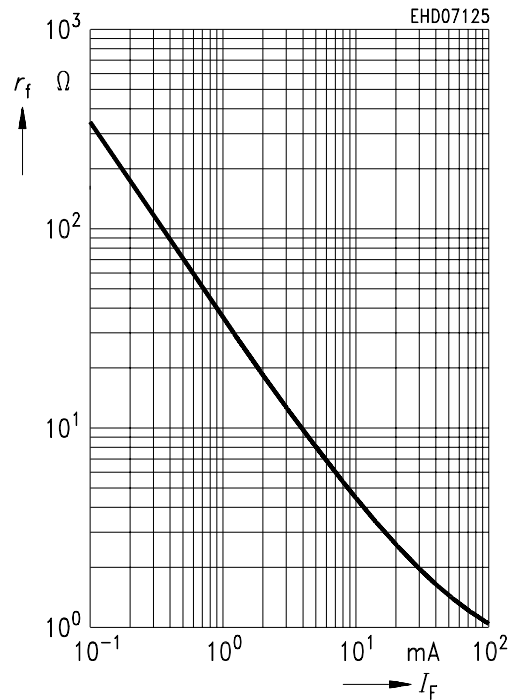
**Package Outline**



**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  $f = 100 \text{ MHz}$**

