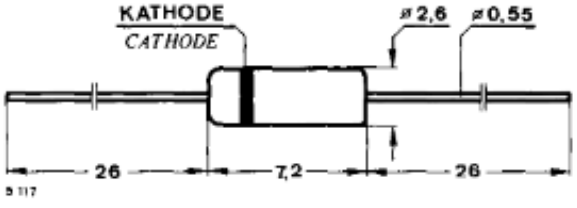
AA 119

Germanium-Spitzendiode
Germanium point contact diode

Anwendungen: Hochohmige Demodulatorschaltungen. Als Diodenpaar für Diskriminator- und Ratiodetektorschaltungen.

Applications: *High impedance demodulator circuits. Matched pairs for discriminator and ratio detector circuits.*

Abmessungen in mm
Dimensions in mm



Normgehäuse
Case
51 A 2 DIN 41 880
JEDEC DO 7
Gewicht · *Weight*
max. 0,2 g

Absolute Grenzdaten
Absolute maximum ratings

Periodische Spitzensperrspannung *Repetitive peak reverse voltage*	U_{RRM}	45	V
Sperrspannung *Reverse voltage*	U_R	30	V
Stoßdurchlaßstrom *Surge forward current*	I_{FSM}	200	mA
Periodischer Durchlaßspitzenstrom *Repetitive peak forward current*	I_{FRM}	100	mA
Durchlaßstrom, Mittelwert *Average forward current*			
$U_R = 0$	I_{FAV}	35	mA
$u_m = U_{RRM}$	I_{FAV}	10	mA
Sperrschichttemperatur *Junction temperature*	t_j	100	°C
Lagerungstemperaturbereich *Storage temperature range*	t_{stg}	−55 ... +100	°C

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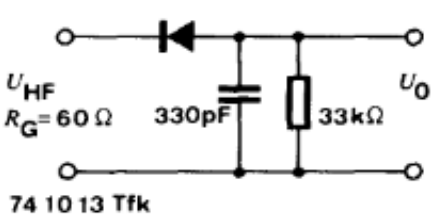
Wärmewiderstand *Thermal resistance*		Min.	Typ.	Max.	
Sperrschicht-Umgebung *Junction ambient* l = 4 mm, t_L = konstant *constant*	R_{thJA}			500	°C/W

Kenngrößen
Characteristics

t_j = 25 °C

Durchlaßspannung *Forward voltage*					
I_F = 0,1 mA	U_F		0,23	0,3	V
I_F = 1 mA	U_F		0,56	0,88	V
I_F = 10 mA	U_F		1,5	2,2	V
I_F = 30 mA	U_F [1]		2,8	4	V
Sperrstrom *Reverse current*					
U_R = 0,1 V	I_R		0,35	1	µA
U_R = 1,5 V	I_R		0,8	2,8	µA
U_R = 10 V	I_R		4,5	18	µA
U_R = 30 V	I_R		35	150	µA
U_R = 45 V	I_R		90	350	µA
Dämpfungswiderstand *Damping resistance* U_{HF} = 3 V, f = 10,7 MHz	r_p [2]	13,5	15	19	kΩ
Richtwirkungsgrad *Rectification efficiency* U_{HF} = 3 V, f = 10,7 MHz	η_r [2]		85		%



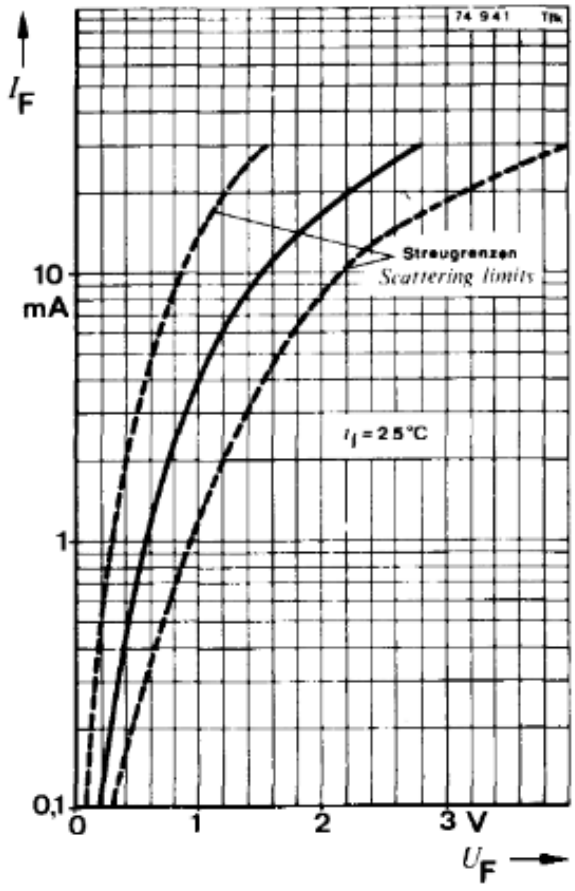
$$\eta_r = \frac{U_0 \cdot 100\,\%}{U_{HF}}$$

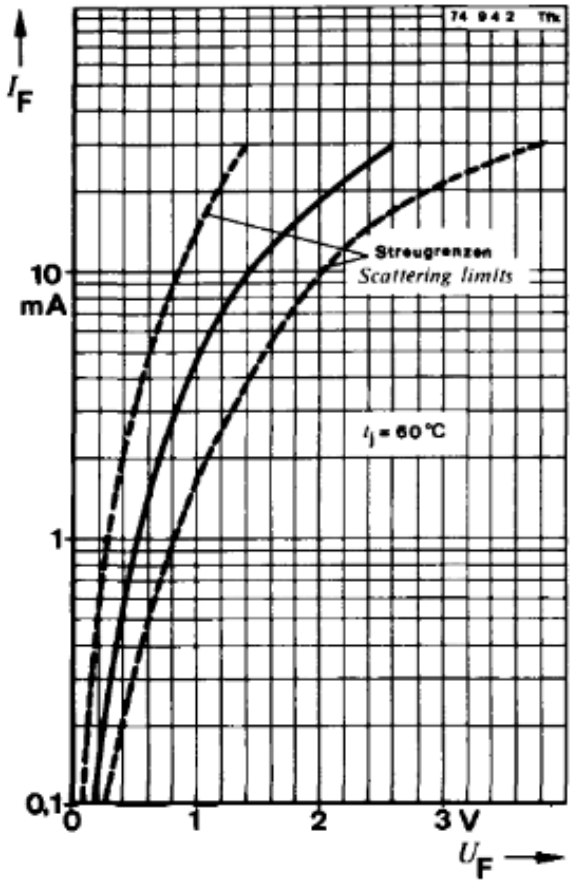
Meßschaltung für : η_r, r_p

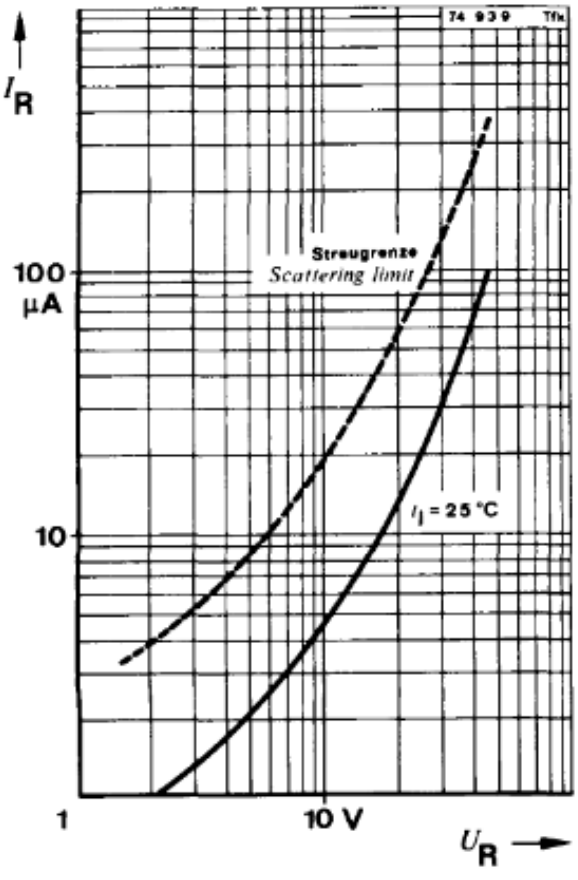
Test circuit for : η_r, r_p

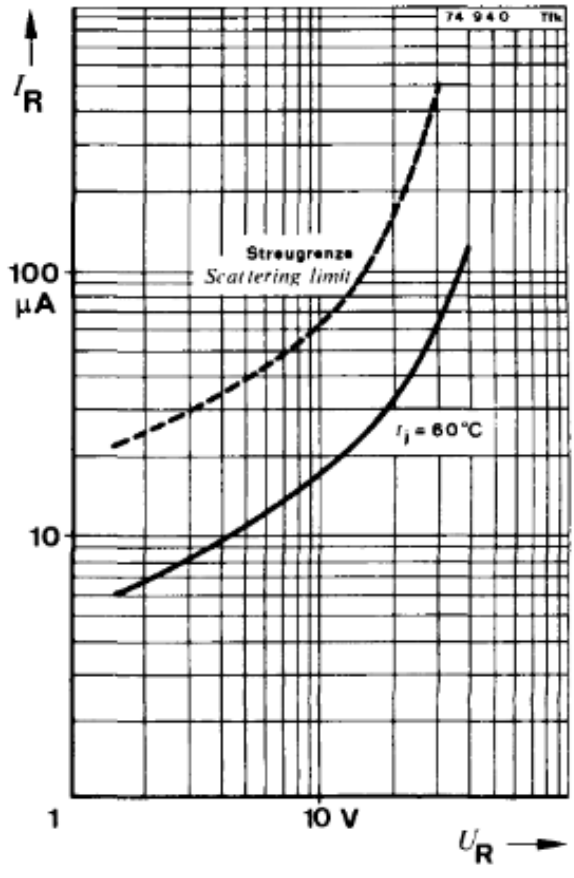
[1] $\frac{t_p}{T}$ = 0,01, t_p = 0,3 ms

[2] siehe Meßschaltung *see test circuit*


74 941 Tfk
I_F
10 mA
1
0,1
0
1
2
3 V
U_F
Streugrenzen
Scattering limits
t_j = 25 °C


74 942 Tfk
I_F
10 mA
1
0,1
0
1
2
3 V
U_F
Streugrenzen
Scattering limits
t_j = 60 °C


74 939 Tfk
I_R
100 µA
10
1
10 V
U_R
Streugrenze
Scattering limit
t_j = 25 °C


74 940 Tfk
I_R
100 µA
10
1
10 V
U_R
Streugrenze
Scattering limit
t_j = 60 °C

Dioden 1977

Diodes 1977