

## PNP Germanium RF Transistor

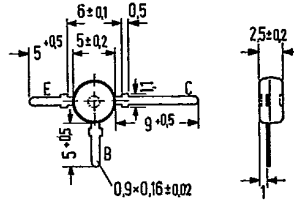
AF 379

SIEMENS AKTIENGESELLSCHAFT

for large signal applications up to 900 MHz

AF 379 is a PNP germanium planar RF transistor in 50 B 3 DIN 41867 plastic package similar to TO 119. The transistor is particularly intended for non-regulated input stages of low cross modulation for use in TV tuners.

Type	Ordering code
AF 379	Q62701-F72



Approx. weight 0.25 g Dimensions in mm

## Maximum ratings

Collector-emitter voltage	$-V_{CEO}$	13	V
Collector-emitter voltage ( $R_{BE} \leq 500 \Omega$ )	$-V_{CER}$	20	V
Emitter-base voltage	$-V_{EBO}$	0.3	V
Collector current	$-I_C$	20	mA
Emitter current	$I_E$	20	mA
Junction temperature	$T_j$	90	°C
Storage temperature range	$T_{stg}$	-30 to +75	°C
Total power dissipation ( $T_{amb} \leq 45^\circ\text{C}$ ) <sup>1)</sup>	$P_{tot}$	100	mW

## Thermal resistance

Junction to case	$R_{thJC}$	$\leq 450$	K/W
------------------	------------	------------	-----

Static characteristics ( $T_{amb} = 25^\circ\text{C}$ )

Collector-emitter breakdown voltage ( $-I_C = 500 \mu\text{A}$ )	$-V_{(BR)CEO}$	$> 13$	V
( $-I_C = 100 \mu\text{A}$ ; $R_{BE} = 500 \Omega$ )	$-V_{(BR)CER}$	$> 20$	V
Emitter-base breakdown voltage ( $I_E = 100 \mu\text{A}$ )	$-V_{(BR)EBO}$	$> 0.3$	V
Collector cutoff current ( $-V_{CB} = 20 \text{ V}$ )	$-I_{CBO}$	$< 15$	$\mu\text{A}$
DC current gain ( $-I_C = 8 \text{ mA}$ ; $-V_{CE} = 8 \text{ V}$ )	$h_{FE}$	80 ( $> 25$ )	-

1) Heat dissipation via the soldered joint of the built-in collector

T-3109 -

**Dynamic characteristics ( $T_{amb} = 25^{\circ}\text{C}$ )**

Transition frequency  
 ( $-I_C = 8 \text{ mA}; -V_{CE} = 8 \text{ V}; f = 100 \text{ MHz}$ )

Output capacitance  
 ( $-V_{CB} = 8 \text{ V}; f = 1 \text{ MHz}$ )

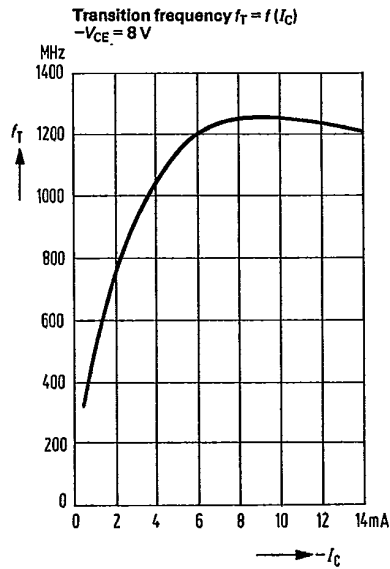
Noise figure  
 ( $-I_C = 2 \text{ mA}; -V_{CE} = 10 \text{ V}; f = 200 \text{ MHz}; R_g = 60 \Omega$ )

( $-I_C = 8 \text{ mA}; -V_{CE} = 8 \text{ V}; f = 800 \text{ MHz}; R_g = 60 \Omega$ )

Interference voltage<sup>1)</sup>  
 ( $-I_C = 8 \text{ mA}; -V_{CE} = 8 \text{ V}; f = 200 \text{ MHz}; R_g = 60 \Omega$ )

Power gain  
 ( $-I_C = 8 \text{ mA}; -V_{CE} = 8 \text{ V}; f = 800 \text{ MHz}; R_g = 60 \Omega; R_L = 2 \text{ k}\Omega$ )

$f_T$	1250	MHz
$C_{ob}$	0.6	pF
NF	2.5	dB
NF	5	dB
$V_{int1\%}$	250	mV
$G_{pb}$	18	dB



1)  $V_{int} 1\%$  is the rms value of the EMF of a 100% sine-wave modulated TV carrier with a generator resistance of  $60 \Omega$  which causes 1% amplitude modulation on the signal carrier.