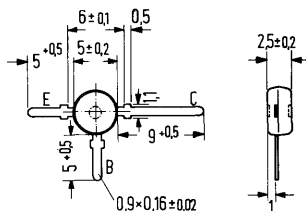


for large signal applications up to 900 MHz

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  
 Collector-emitter voltage ( $R_{BE} \leq 500 \Omega$ )  
 Emitter-base voltage  
 Collector current  
 Emitter current  
 Junction temperature  
 Storage temperature range  
 Total power dissipation ( $T_{amb} \leq 45^\circ C$ )<sup>1)</sup>

|            |            |            |
|------------|------------|------------|
| $-V_{CEO}$ | 13         | V          |
| $-V_{CER}$ | 20         | V          |
| $-V_{EBO}$ | 0.3        | V          |
| $-I_C$     | 20         | mA         |
| $I_E$      | 20         | mA         |
| $T_j$      | 90         | $^\circ C$ |
| $T_{stg}$  | -30 to +75 | $^\circ C$ |
| $P_{tot}$  | 100        | mW         |

Thermal resistance

Junction to case

|            |            |     |
|------------|------------|-----|
| $R_{thJC}$ | $\leq 450$ | K/W |
|------------|------------|-----|

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

Collector-emitter breakdown voltage  
 ( $-I_C = 500 \mu A$ )  
 ( $-I_C = 100 \mu A; R_{BE} = 500 \Omega$ )  
 Emitter-base breakdown voltage  
 ( $I_E = 100 \mu A$ )  
 Collector cutoff current  
 ( $-V_{CB} = 20 V$ )  
 DC current gain  
 ( $-I_C = 8 mA; -V_{CE} = 8 V$ )

|                |               |         |
|----------------|---------------|---------|
| $-V_{(BR)CEO}$ | $> 13$        | V       |
| $-V_{(BR)CER}$ | $> 20$        | V       |
| $-V_{(BR)EBO}$ | $> 0.3$       | V       |
| $-I_{CBO}$     | $< 15$        | $\mu A$ |
| $h_{FE}$       | 80 ( $> 25$ ) | -       |

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

**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>**

( $-I_C = 8\text{ mA}$ ;  $-V_{CE} = 8\text{ V}$ ;  $f = 200\text{ MHz}$ ;

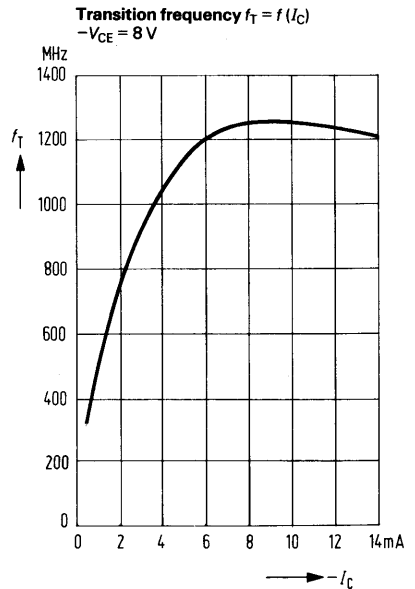
$R_g = 60\ \Omega$ )

**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.