

TRANSISTORI AL GERMANIO
PER ALTA FREQUENZA

R.F. GERMANIUM ALLOY-DIFFUSED TRANSISTOR

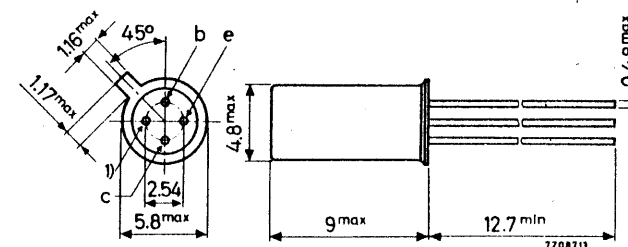
P-N-P transistor in a metal envelope with insulated leads and a shield lead connected to the case. It is intended for application at frequencies up to 100 MHz.

QUICK REFERENCE DATA

Collector-base voltage (open emitter)	$-V_{CBO}$	max.	25 V
Collector-emitter voltage $R_B/R_E < 100$; $R_E > 200 \Omega$	$-V_{CER}$	max.	25 V
Collector current (peak value)	$-I_{CM}$	max.	15 mA
Total power dissipation up to $T_{amb} = 45^\circ\text{C}$	P_{tot}	max.	140 mW
Junction temperature, incidentally	T_j	max.	90 $^\circ\text{C}$
Feedback capacitance at $f = 0.45 \text{ MHz}$ $-I_C = 1 \text{ mA}$; $-V_{CE} = 10 \text{ V}$	$-C_{re}$	typ.	450 fF
Transition frequency $-I_C = 3 \text{ mA}$; $-V_{CE} = 10 \text{ V}$	f_T	typ.	270 MHz
Transfer admittance at $f = 35 \text{ MHz}$ $-I_C = 3 \text{ mA}$; $-V_{CE} = 10 \text{ V}$	$ y_{fe} $	typ.	80 $\text{m}\Omega^{-1}$

MECHANICAL DATA

Dimensions in mm



1) = shield lead (connected to case)

Accessories available: 56246, 56263

GERMANIUM ALLOY DIFFUSED TRANSISTOR

P-N-P transistor in a TO-72 metal envelope with a shield lead connected to the case. It has low noise and high power gain up to frequencies of 100 MHz and is intended for use as r.f. amplifier in f.m. receivers.

RATINGS (Limiting values) ¹⁾

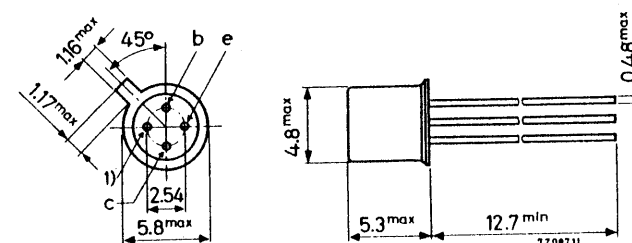
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	32 V
Collector-emitter voltage ($Z_B/Z_E < 15$)	$-V_{CER}$	max.	32 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	15 V
Collector current (d.c.)	$-I_C$	max.	10 mA
Base current (d.c.)	$ I_B $	max.	1 mA
Reverse emitter current	$-I_E$	max.	1 mA
Total power dissipation up to $T_{amb} = 45^\circ\text{C}$	P_{tot}	max.	60 mW
Storage temperature	T_{stg}		-55 to $+75^\circ\text{C}$
Junction temperature: continuous	T_j	max.	75 $^\circ\text{C}$
incidentally	T_j	max.	90 $^\circ\text{C}$

THERMAL RESISTANCE

From junction to ambient in free air	$R_{th j-a}$	=	0.75 $^\circ\text{C}/\text{mW}$
From junction to case	$R_{th j-c}$	=	0.4 $^\circ\text{C}/\text{mW}$

MECHANICAL DATA

TO-72



Dimensions in mm

¹⁾ = shield lead (connected to case)

Accessories available: 56246, 56263

¹⁾ Limiting values according to the Absolute Maximum System as defined in IEC publication 134.

GERMANIUM ALLOY DIFFUSED TRANSISTOR

P-N-P transistor in a TO-72 metal envelope with a shield lead connected to the case. It has a high conversion gain up to frequencies of 100 MHz and is intended for use as r.f. amplifiers and mixer-oscillator in short-wave receivers up to 27 MHz.

RATINGS (Limiting values) ¹⁾

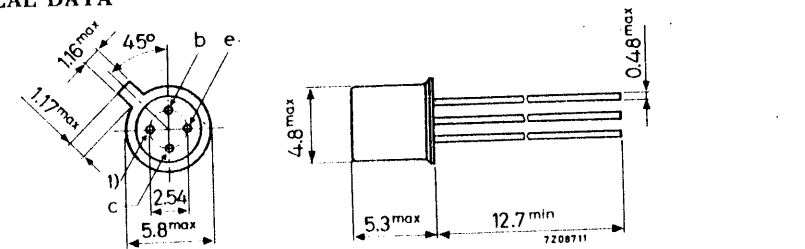
Collector base voltage (open emitter)	$-V_{CBO}$	max.	32 V
Collector-emitter voltage ($Z_B/Z_E < 15$)	$-V_{CER}$	max.	32 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	15 V
Collector current (d.c.)	$-I_C$	max.	10 mA
Base current (d.c.)	$ I_B $	max.	1 mA
Reverse emitter current	$-I_E$	max.	1 mA
Total power dissipation up to $T_{amb} = 45^\circ\text{C}$	P_{tot}	max.	60 mW
Storage temperature	T_{stg}		-55 to +75 °C
Junction temperature: continuous	T_j	max.	75 °C
Junction temperature: incidentally	T_j	max.	90 °C

THERMAL RESISTANCE

From junction to ambient in free air	$R_{th\ j-a}$	=	0.75 °C/mW
From junction to case	$R_{th\ j-c}$	=	0.4 °C/mW

MECHANICAL DATA

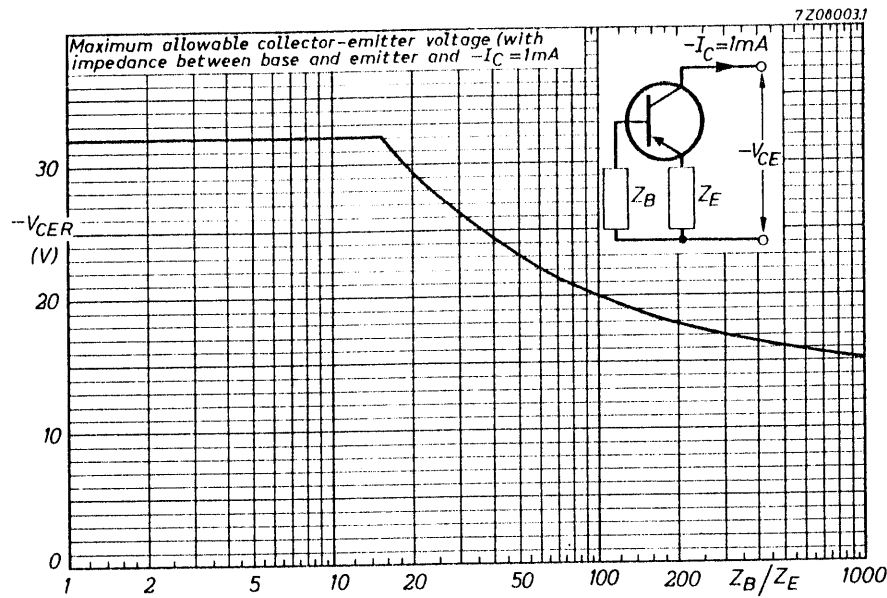
TO-72

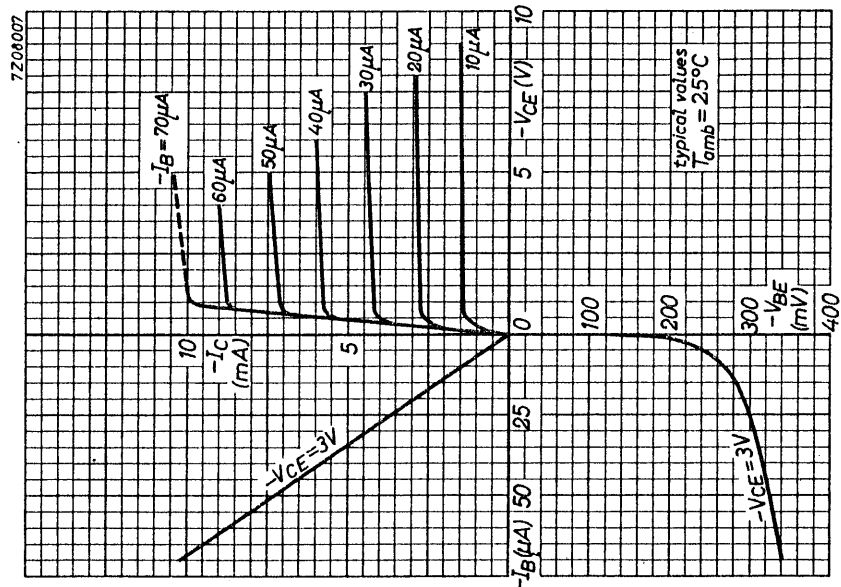
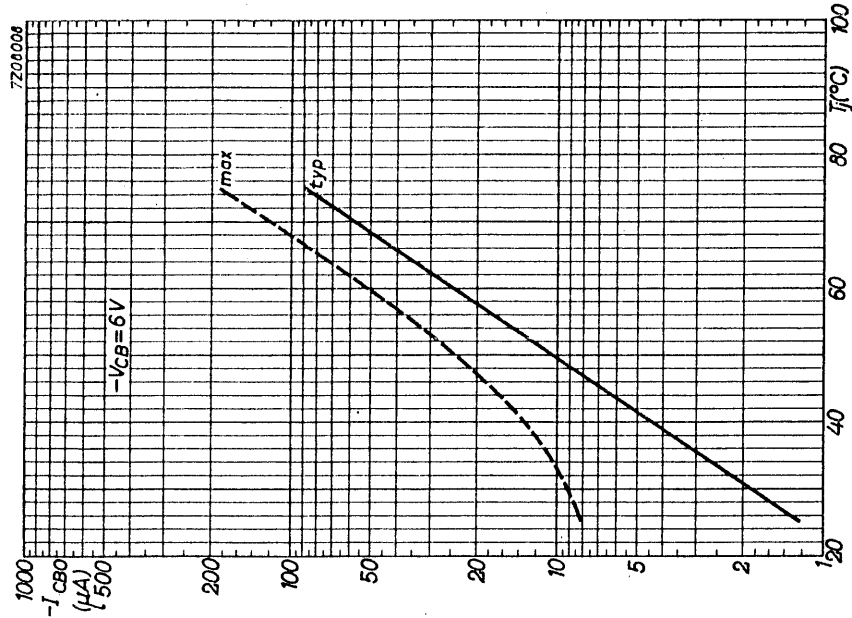


1) = shield lead (connected to case)

Accessories available: 56246, 56263

¹⁾ Limiting values according to the Absolute Maximum System as defined in IEC publication 134.





GERMANIUM ALLOY DIFFUSED TRANSISTOR

P-N-P transistor in a TO-72 metal envelope with a shield lead connected to the case. It has low output conductance and low collector capacitance at 10.7 MHz and low noise and good a.g.c. performance for use as i.f. amplifier in a.m. and f.m. receivers and as amplifier and mixer-oscillator in short-wave receivers up to 16 MHz.

RATINGS (Limiting values)¹⁾

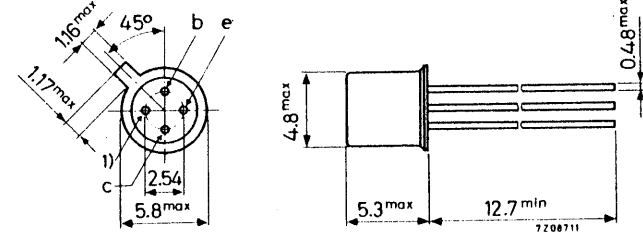
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	32 V
Collector-emitter voltage ($Z_B/Z_E < 15$)	$-V_{CER}$	max.	32 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	15 V
Collector current (d.c.)	$-I_C$	max.	10 mA
Base current (d.c.)	$ I_B $	max.	1 mA
Reverse emitter current	$-I_E$	max.	1 mA
Total power dissipation up to $T_{amb} = 45 °C$	P_{tot}	max.	60 mW
Storage temperature	T_{stg}		-55 to +75 °C
Junction temperature : continuous	T_j	max.	75 °C
	T_j	max.	90 °C
incidentally			

THERMAL RESISTANCE

From junction to ambient in free air	$R_{th j-a}$	=	0.75 °C/mW
From junction to case	$R_{th j-c}$	=	0.4 °C/mW

MECHANICAL DATA

TO-72

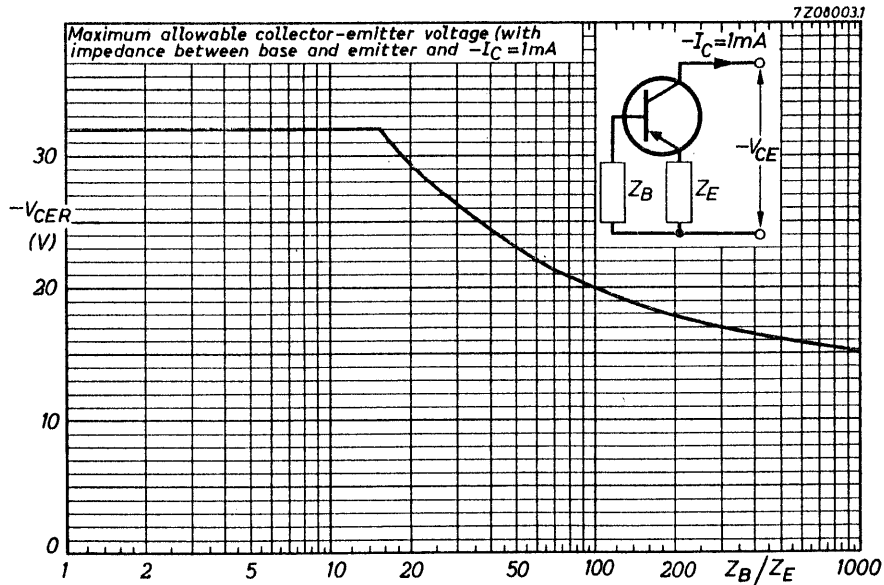
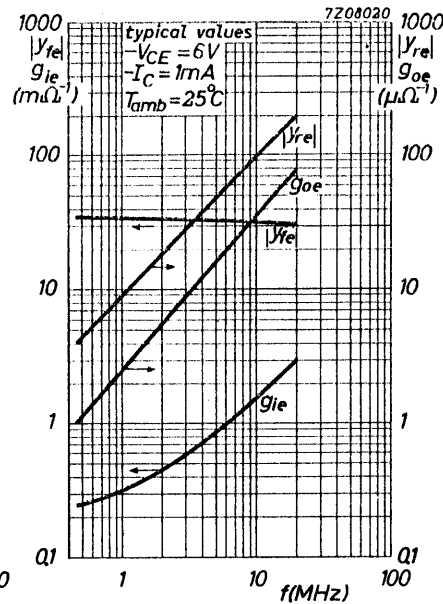
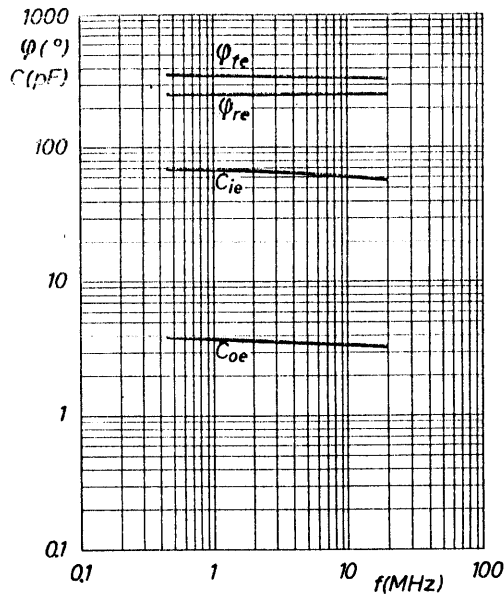


Dimensions in mm

¹⁾ = shield lead (connected to case)

Accessories available: 56246, 56263

¹⁾ Limiting values according to the Absolute Maximum System as defined in IEC publication 134.



GERMANIUM ALLOY DIFFUSED TRANSISTOR

P-N-P transistor in a TO-72 metal envelope with a shield lead connected to the case. It has a low collector capacitance, low noise and good a.g.c. performance and is intended for use as i.f. amplifier, r.f. amplifier and mixer-oscillator in a.m. receivers up to 6 MHz.

RATINGS (Limiting values) ¹⁾

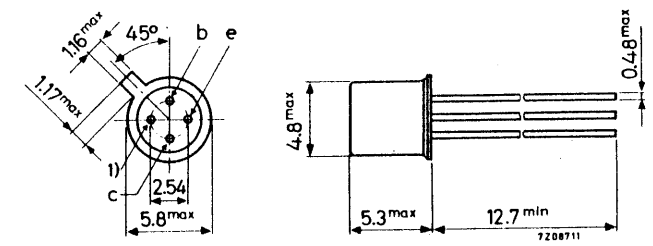
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	32 V
Collector-emitter voltage ($Z_B/Z_E < 15$)	$-V_{CER}$	max.	32 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	15 V
Collector current (d.c.)	$-I_C$	max.	10 mA
Base current (d.c.)	$ I_B $	max.	1 mA
Reverse emitter current	$-I_E$	max.	1 mA
Total power dissipation up to $T_{amb} = 45^\circ C$	P_{tot}	max.	60 mW
Storage temperature	T_{stg}		-55 to $+75^\circ C$
Junction temperature : continuous	T_j	max.	$75^\circ C$
incidentally	T_j	max.	$90^\circ C$

THERMAL RESISTANCE

From junction to ambient in free air	$R_{th j-a}$	=	$0.75^\circ C/mW$
From junction to case	$R_{th j-c}$	=	$0.4^\circ C/mW$

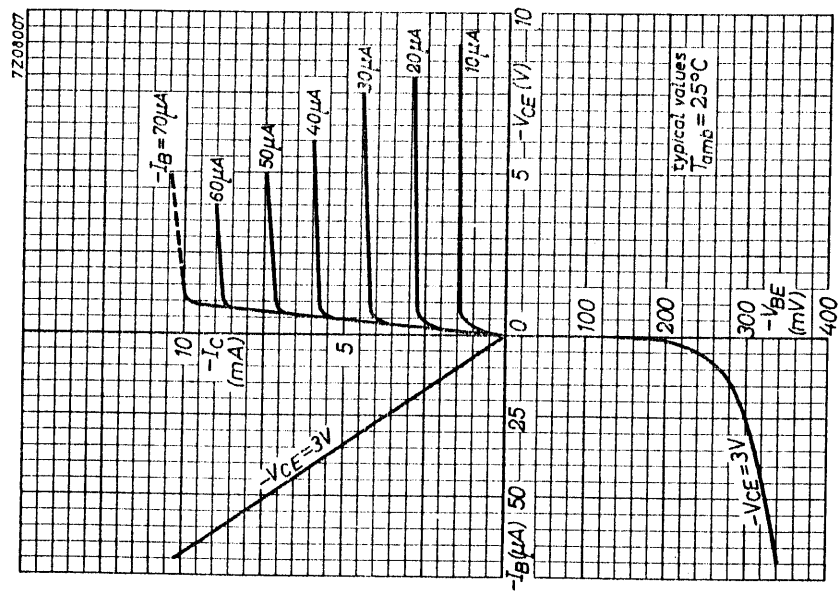
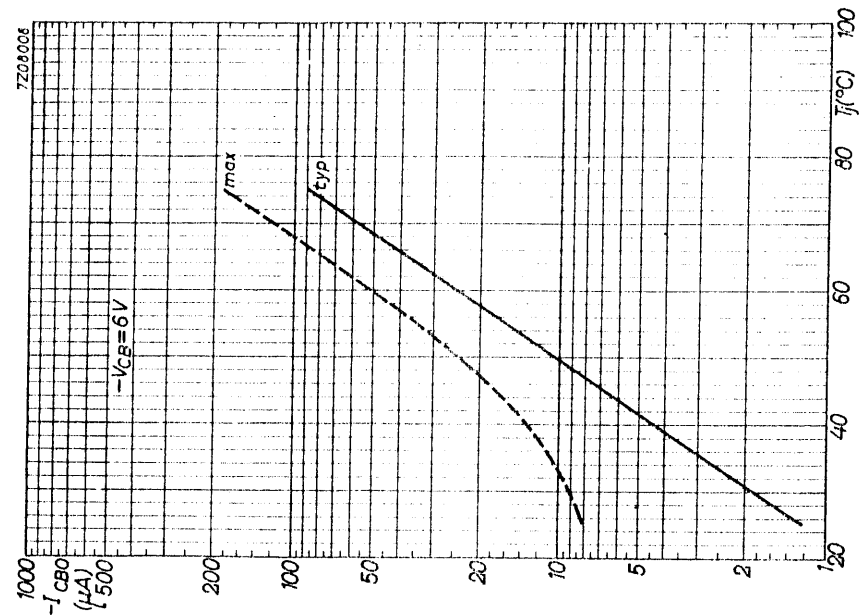
MECHANICAL DATA

TO-72



Accessories available: 56246, 56263

¹⁾ Limiting values according to the Absolute Maximum System as defined in IEC publication 134.



U.H.F. GERMANIUM MESA TRANSISTOR

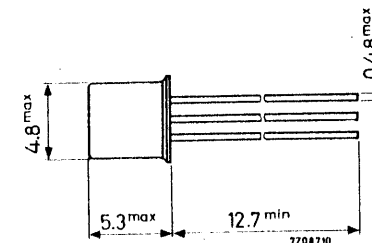
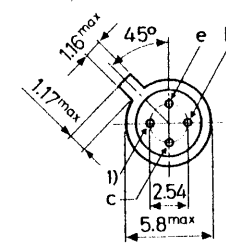
P-N-P transistor in a TO-72 metal envelope, primarily intended for use in pre-amplifier, mixer or oscillator circuits up to frequencies of 860 MHz.

QUICK REFERENCE DATA

Collector-base voltage (open emitter)	$-V_{CBO}$	max. 20 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max. 15 V
Collector current (d.c.)	$-I_C$	max. 10 mA
Total power dissipation up to $T_{amb} = 45^{\circ}C$	P_{tot}	max. 60 mW
Junction temperature	T_j	max. 90 $^{\circ}C$
Transition frequency	f_T	typ. 550 MHz
$-I_C = 1.5$ mA; $-V_{CE} = 12$ V		
Max. unilateralised power gain	GUM	typ. 11.5 dB
$I_E = 1.5$ mA; $-V_{CB} = 12$ V; $f = 800$ MHz		
Noise figure	F	typ. 7 dB
$I_E = 1.5$ mA; $-V_{CB} = 12$ V;		
$f = 800$ MHz; $R_S = 60 \Omega$		

MECHANICAL DATA

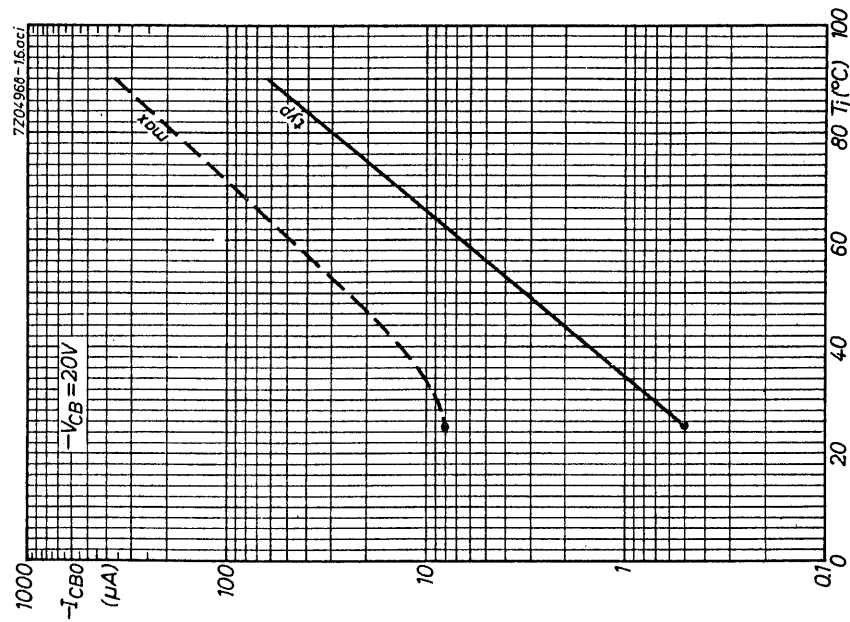
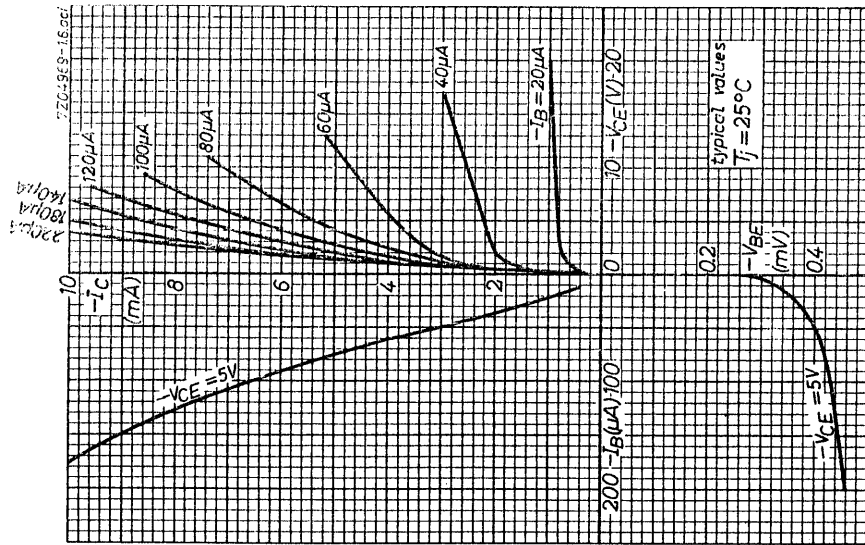
TO-72



Dimensions in mm

1) = shield lead (connected to case)

Accessories available: 56246, 56263



U.H.F GERMANIUM MESA TRANSISTOR

P-N-P transistor in a TO-72 metal envelope, primarily intended for use in pre-amplifier, mixer or oscillator circuits up to frequencies of 890 MHz.

QUICK REFERENCE DATA

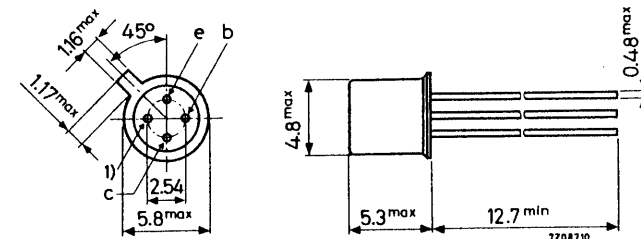
Collector-base voltage (open emitter)	-V _{CBO}	max.	20 V
Collector-emitter voltage (open base)	-V _{CEO}	max.	15 V
Collector current (d.c.)	-I _C	max.	15 mA
Total power dissipation up to T _{amb} = 45 °C	P _{tot}	max.	60 mW
Junction temperature	T _j	max.	90 °C
Transition frequency	f _T	typ.	650 MHz
Max. unilateralised power gain	G _{UM}	typ.	17 dB
Noise figure	F	typ.	3 dB
	F	typ.	5 dB

-I_C = 2 mA; -V_{CE} = 10 V
 I_E = 2 mA; -V_{CB} = 10 V; f = 800 MHz
 G_S = 16.7 mΩ⁻¹; B_S = 0
 f = 200 MHz
 f = 800 MHz

MECHANICAL DATA

Dimensions in mm

TO-72



1) = shield lead (connected to case)

Accessories available: 56246, 56263