

BLX65

U.H.F./V.H.F. TRANSMITTING TRANSISTOR

N-P-N transistor intended for use in class-B and C operated mobile, industrial and military transmitters with a supply voltage of 13,8 V. It has a TO-39 metal envelope with the collector connected to the case.

QUICK REFERENCE DATA

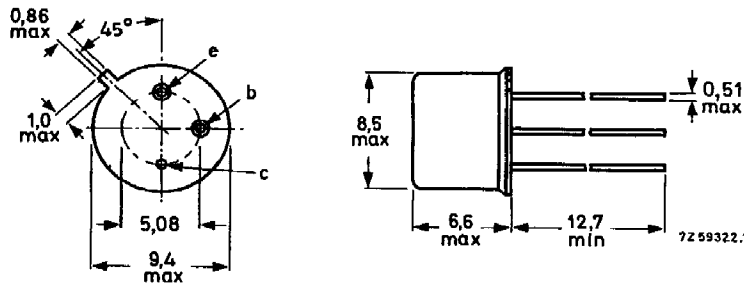
R.F. performance up to $T_{case} = 25\text{ }^{\circ}\text{C}$ in an unneutralized common-emitter class-B circuit

mode of operation	V_{CE} V	f MHz	P_S W	P_L W	I_C A	G_p dB	η %	\bar{z}_i Ω	\bar{Y}_L mS
c.w.	13,8	470	typ. 0,4	2,0	typ. 0,22	typ. 7	typ. 66	$5 + j11$	$17 - j19$
c.w.	12,5	470	< 0,5	2,0	< 0,25	> 6	> 65	—	—
c.w.	12,5	175	typ. 0,12	2,0	typ. 0,21	typ. 12	typ. 75	—	—

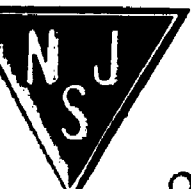
MECHANICAL DATA

Dimensions in mm

Fig.1 TO-39/1; collector connected to case.



Maximum lead diameter is guaranteed only for 12,7 mm.



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RATINGS Limiting values in accordance with the Absolute Maximum System (IEC134)

Collector-base voltage (open emitter) peak value	V_{CBOM}	max.	36	V
Collector-emitter voltage ($V_{BE} = 0$) peak value	V_{CESM}	max.	36	V
Collector-emitter voltage (open base)	V_{CEO}	max.	18	V
Emitter-base voltage (open collector)	V_{EBO}	max.	4	V
Collector current (average)	$I_{C(AV)}$	max.	0.7	A
Collector current (peak value) $f > 1$ MHz	I_{CM}	max.	2.0	A
Total power dissipation up to $T_{case} = 90$ °C $f > 10$ MHz	P_{tot}	max.	3.0	W
Storage temperature	T_{stg}		-65 to +150	°C
Operating junction temperature	T_j	max	165	°C

THERMAL RESISTANCE

From junction to case	$R_{th\ j-c}$	=	25	K/W
From mounting base to heatsink with a boron nitride washer for electrical insulation	$R_{th\ mb-h}$	=	2.5	K/W

CHARACTERISTICS $T_j = 25$ °C unless otherwise specified

Breakdown voltages

Collector-base voltage open emitter, $I_C = 10$ mA	$V_{(BR)CBO}$	>	36	V
Collector-emitter voltage $V_{BE} = 0$; $I_C = 10$ mA	$V_{(BR)CES}$	>	36	V
Collector-emitter voltage open base, $I_C = 25$ mA	$V_{(BR)CEO}$	>	18	V
Emitter-base voltage open collector, $I_E = 1.0$ mA	$V_{(BR)EBO}$	>	4	V
Collector-emitter saturation voltage $I_C = 100$ mA; $I_B = 20$ mA	V_{CEsat}	typ.	0.1	V
D. C. current gain $I_C = 100$ mA; $V_{CE} = 5$ V	h_{FE}	> typ.	10 40	
Transition frequency $I_C = 200$ mA; $V_{CE} = 5$ V; $f = 500$ MHz	f_T	typ.	1400	MHz
Collector capacitance at $f = 1$ MHz $I_E = I_e = 0$; $V_{CB} = 10$ V	C_c	typ. <	6.5 9.0	pF pF
Feedback capacitance at $f = 1$ MHz $I_C = 20$ mA; $V_{CE} = 10$ V	$-C_{re}$	typ.	4.8	pF