

# Technical Data

## TRANSISTOR

### maximum ratings

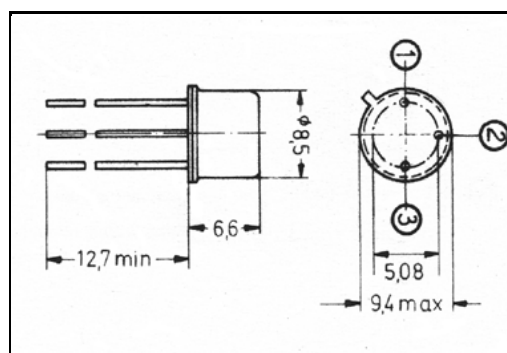
Voltage, Collector to Base (VCBO)	55.0	V	NO.	2N3866
Voltage, Collector to Emitter (VCE)	30.0	V	TYPE	NPN-RF
Voltage, Emitter to Base (VEBO)	3.5	V		
Collector Current (IC)	0.4	A		
Base Current (IB)	0.05	A	CASE	TO-39
Max. Power Dissipation (PT) at TC = 25 °C	5.0	W		
Max. Thermal Resistance (Rth J-C)	35.0	°C/W		
Max. Junction Temperature (TJ)	200.0	°C		

### PERFORMANCE CHARACTERISTICS at $T_c = 25^\circ\text{C}$ , unless otherwise noted

NO.	SYMBOL	CONDITIONS	MIN.	MAX.	UNITS
1.	BVCEO	IC = 5.0 mA (1)	40.0	-	V
2.	BVEBO	IE = 100.0 $\mu\text{A}$	3.5	-	V
3.	ICEO	VCE = 28.0 V	-	20.0	$\mu\text{A}$
4.	ICEX	VCE = 55.0 V, VBE = 1.5 V	-	250.0	$\mu\text{A}$
5.	IEBO	VEB = 3.5 V	-	100.0	$\mu\text{A}$
6.	hFE	IC = 50.0 mA, VCE = 5.0 V (1)	10.0	200.0	-
7.	VCE(SAT)	IC = 100.0 mA, IB = 20.0 mA (1)	-	1.0	V
8.	fT	IC = 50.0 mA, VCE = 15.0 V, f = 200.0 MHz (2)	500.0	-	MHz
9.	Cobo	VCB = 28.0 V, f = 1.0 MHz	-	3.0	pF
10.	PIN	VCE = 28.0 V, Pout = 1.0 W, f = 400.0 MHz	-	100.0	mW
11.	GPE	VCE = 28.0 V, Pout = 1.0 W, f = 400.0 MHz	10.0	-	dB
12.	$\eta$	VCE = 28.0 V, Pout = 1.0 W, f = 400.0 MHz	45.0	-	%
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

Notes (1) pulse-tested  $t_p \leq 300 \mu\text{s}$ , duty cycle  $\leq 2\%$   
(2) typical value

DIMENSIONS  
in mm



Marking 2N3866  
Customer GENERAL PURPOSE