NPN 2N3866

SILICON PLANAR EPITAXIAL TRANSISTORS

The 2N3866 are NPN transistors mounted in TO-39 metal package with the collector connected to the case .
They are intended for VHF-UHF class A, B or C amplifier circuits and oscillator applications.
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CEO}	Collector-Emitter Voltage		30	V
V_{CES}	Collector-Emitter Voltage (V_{BE} = 0)		55	V
V_{EBO}	Emitter-Base Voltage		3.5	V
I_C	Collector Current		0.5	A
P_D	Total Power Dissipation	@ T_{case}= 25°	5	Watts
T_J	Junction Temperature		200	°C
T_{Stg}	Storage Temperature range		-65 to +200	°C

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-c}	Thermal Resistance, Junction-case	35	°C/ W

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
I_{CEO}	Collector Cutoff Current	V_{CE}=28 V, I_B=0	-	-	20	µA
V_{CEO} (*)	Collector Emitter Sustaining Voltage	I_C=5 mA, I_B=0	30	-	-	V
V_{CES}	Collector Base Breakdown Voltage	I_C=100 µA, V_{BE}=0	55	-	-	V
V_{EBO}	Emitter Base Breakdown Voltage	I_E=100 µA, I_C=0	3.5	-	-	V
h_{FE} (*)	DC Current Gain	I_C=50 mA, V_{CE}=5 V	10	-	200	-
		I_C=360 mA, V_{CE}=5 V	5	-	-	
$V_{CE(SAT)}$ (*)	Collector-Emitter saturation Voltage	I_C=100 mA I_B=20 mA	-	-	1	V

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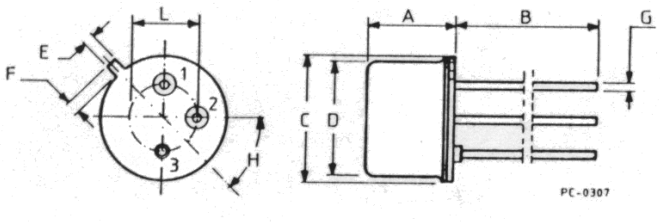
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
f_T	Transition Frequency	I_C=50 mA, V_{CE}=15 V f= 200MHz	500	-	-	MHz
C_{CBO}	Collector-Base Capacitance	I_E= 0 ,V_{CB}= -28 V f = 1MHz	-	-	3	pF
$P_{O\ (**)}$	Output Power	V_{CC}= -28V P_i =100 mW f = 400 MHz	1	-	-	pF
$\eta_{\ (**)}$	Collector Efficiency	V_{CC}= -28V ,P_o =1 W f = 400 MHz	45	-	-	ps

(*) Pulse conditions : tp < 300 μs, δ =1%.

(**) See test circuit.

MECHANICAL DATA CASE TO-39

DIMENSIONS	
	mm
A	6,25
B	13,59
C	9,24
D	8,24
E	0,78
F	1,05
G	0,42
H	45°
L	4,1



Pin 1 :	Emitter
Pin 2 :	Base
Pin 3 :	Collector
Case :	Collector

Revised August 2012