

isc Silicon NPN Planar Epitaxial Overlay Transistor

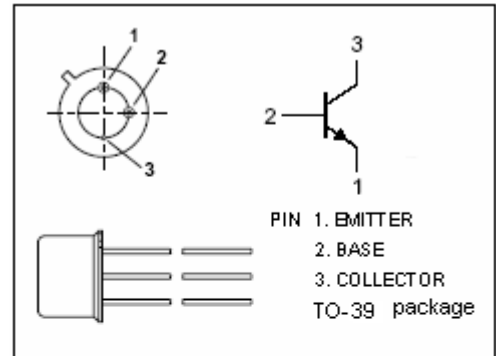
2N3866

DESCRIPTION

- This type is primarily intended for class-A, B or C amplifiers, Frequency multiplier and oscillator circuits.
- High Gain Bandwidth Product
 $f_T = 500 \text{ MHz (Min.)}$
- Low Collector Capacitance;
 $C_C = 3 \text{ pF Max.}$

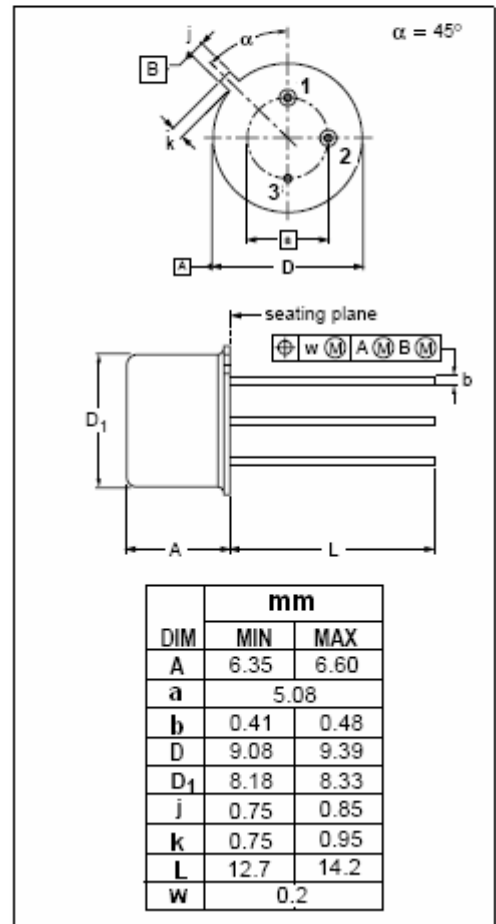
APPLICATIONS

- Designed for use in output, driver or pre-driver stages in VHF and UHF equipment.



ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	55	V
V_{CER}	Collector-Emitter Voltage $R_{BE} = 10 \Omega$	55	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	3.5	V
I_C	Collector Current-Continuous	0.4	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	3.5	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~+200	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=5\text{mA}; I_B=0$	30			V
$V_{(BR)CER}$	Collector-Emitter Breakdown Voltage	$I_C=5\text{mA}; R_{BE}=10\ \Omega$	55			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=0.1\text{mA}; I_E=0$	55			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=0.1\text{mA}; I_C=0$	3.5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100\text{mA}; I_B=20\text{mA}$			1.0	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=28\text{V}; I_B=0$			20	μA
h_{FE-1}	DC Current Gain	$I_C=50\text{mA}; V_{CE}=5\text{V}$	10		200	
h_{FE-2}	DC Current Gain	$I_C=360\text{mA}; V_{CE}=5\text{V}$	5			
f_T	Current-Gain—Bandwidth Product	$I_C=50\text{mA}; V_{CE}=15\text{V}, f=200\text{MHz}$	500			MHz
C_C	Output Capacitance	$I_E=0; V_{CB}=28\text{V}; f=1\text{MHz}$			3	pF