

**DESCRIPTION**

- High Gain Bandwidth Product  
 $f_T = 500 \text{ MHz (Min.)}$
- Low Collector Capacitance;  
 $C_C = 3 \text{ pF Max.}$

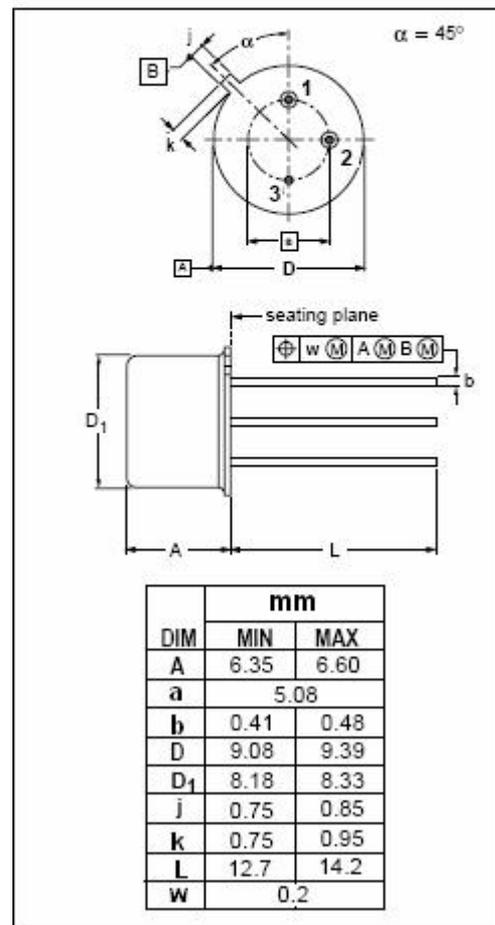
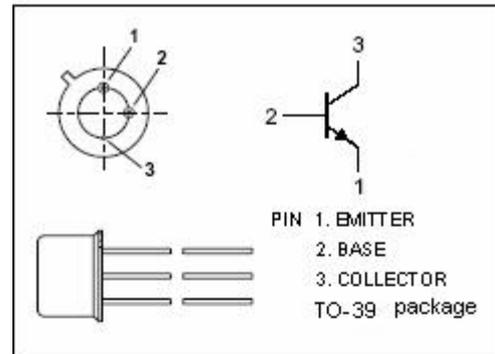
Minimum Lot-to-Lot variations for robust device performance and reliable operation

**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	$^\circ\text{C}$



**isc Silicon NPN Planar Epitaxial Overlay Transistor****2N3866****ELECTRICAL CHARACTERISTICS****T<sub>c</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 5mA; I <sub>B</sub> = 0	30			V
V <sub>(BR)CER</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = 5mA; R <sub>BE</sub> = 10 Ω	55			V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = 0.1mA; I <sub>E</sub> = 0	55			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = 0.1mA; I <sub>C</sub> = 0	3.5			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 100mA; I <sub>B</sub> = 20mA			1.0	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = 28V; I <sub>B</sub> = 0			20	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = 50mA ; V <sub>CE</sub> = 5V	10		200	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = 360mA ; V <sub>CE</sub> = 5V	5			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = 50mA; V <sub>CE</sub> = 15V, f = 200MHz	500			MHz
C <sub>C</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = 28V; f= 1MHz			3	pF

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