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## **ON Semiconductor**®

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SEMICONDUCTOR TM

## **KSD1408**

## **Power Amplifier Applications**

Complement to KSB1017



1.Base 2.Collector 3.Emitter

## NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T<sub>C</sub>=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	80	V
V <sub>CEO</sub>	Collector-Emitter Voltage	80	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current	4	Α
I <sub>B</sub>	Base Current	0.4	Α
P <sub>C</sub>	Collector Dissipation (T <sub>C</sub> =25°C)	25	W
TJ	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	- 55 ~ 150	°C

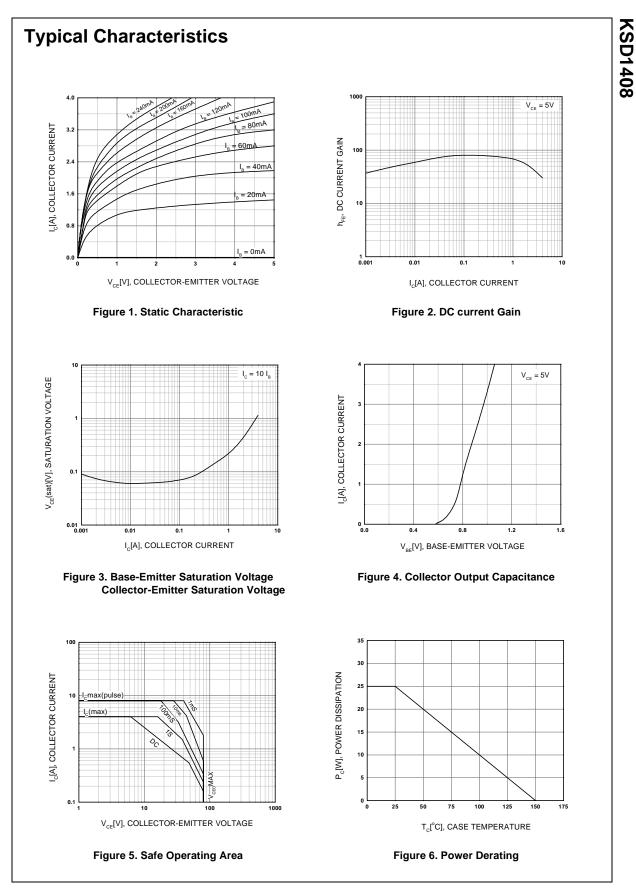
### Electrical Characteristics $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	$I_{\rm C} = 50 {\rm mA}, I_{\rm B} = 0$	80			V
I <sub>CBO</sub>	Collector Cut-off Current	$V_{CB} = 80V, I_E = 0$			30	μΑ
I <sub>EBO</sub>	Emitter Cut-off Current	$V_{EB} = 5V, I_{C} = 0$			100	μΑ
h <sub>FE1</sub>	DC Current Gain	$V_{CE} = 5V, I_{C} = 0.5A$	40		240	
h <sub>FE2</sub>		$V_{CE} = 5V, I_{C} = 3A$	15	50		
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 3A. I <sub>B</sub> = 0.3A		0.45	1.5	V
V <sub>BE</sub> (on)	Base-Emitter On Voltage	$V_{CE} = 5V, I_{C} = 3A$		1	1.5	V
f <sub>T</sub>	Current Gain Bandwidth Product	$V_{CE} = 5V, I_{C} = 0.5A$		8		MHz
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> = 10V, f = 1MHz		90		pF

## h<sub>FE1</sub> Classification

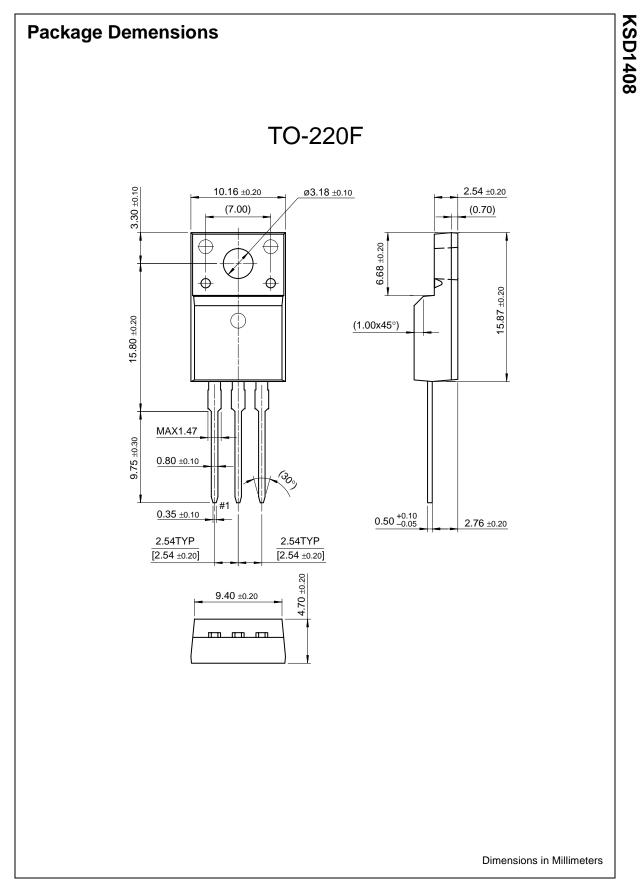
Classification	R	0	Y				
h <sub>FE1</sub>	40 ~ 80	70 ~ 140	120 ~ 240				

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Rev. A, February 2000



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