

## KSB1098

## **Low Frequency Power Amplifier**

- Low Speed Switchng Industrial Use
- Complement to KSD1589



## **PNP Silicon Darlington Transistor**

## Absolute Maximum Ratings $T_C=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	- 100	V
V <sub>CEO</sub>	Collector-Emitter Voltage	- 100	V
V <sub>EBO</sub>	Emitter-Base Voltage	- 7	V
I <sub>C</sub>	Collector Current (DC)	- 5	Α
I <sub>CP</sub>	*Collector Current (Pulse)	- 8	Α
I <sub>B</sub>	Base Current	- 0.5	Α
P <sub>C</sub>	Collector Dissipation (T <sub>a</sub> =25°C)	2	W
P <sub>C</sub>	Collector Dissipation (T <sub>C</sub> =25°C)	20	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	- 55 ~ 150	°C

<sup>\*</sup> PW≤300μs, Duty Cycle≤10%

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

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
I <sub>CBO</sub>	Collector Cut-off Current	$V_{CB} = -100V, I_{E} = 0$			- 1	μΑ
I <sub>EBO</sub>	Emitter Cut-off Current	$V_{EB} = -5V, I_{C} = 0$			- 3	mA
h <sub>FE1</sub>	* DC Current Gain	$V_{CE} = -2V, I_{C} = -3A$	2000		15K	
$h_{FE2}$		$V_{CE} = -2V, I_{C} = -5A$	500			
V <sub>CE</sub> (sat)	* Collector-Emitter Saturation Voltage	$I_C = -3A, I_B = -3mA$			- 1.5	V
V <sub>BE</sub> (sat)	* Base-Emitter Saturation Voltage	$I_C = -3A, I_B = -3mA$			- 2	V
t <sub>ON</sub>	Turn ON Time	$V_{CC} = -50V, I_{C} = -3A$		0.5		μs
t <sub>STG</sub>	Storage Time	$I_{B1} = -I_{B2} = -3mA$		1		μs
t <sub>F</sub>	Fall Time	$R_L = 17\Omega$		1		μs

<sup>\*</sup> Pulse Test: PW≤350μs, Duty Cycle≤2% Pulsed

### **h**<sub>FE</sub> Classification

Classification	R	0	Y	
h <sub>FE1</sub>	2000 ~ 5000	3000 ~ 7000	5000 ~ 15000	

# **Typical Characteristics**

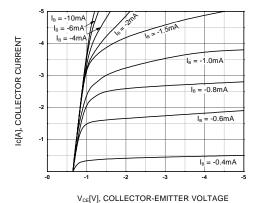


Figure 1. DC current Gain

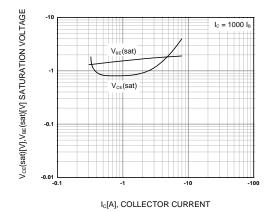


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

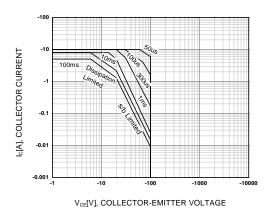


Figure 3. Safe Operating Area

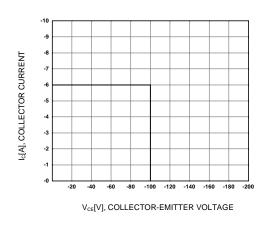


Figure 4. Reverse Bias Safe Operating Area

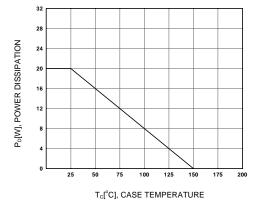
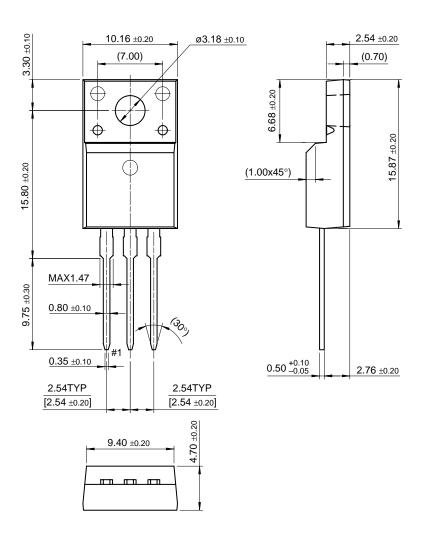


Figure 5. Power Derating

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# **Package Demensions**

# TO-220F



Dimensions in Millimeters

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