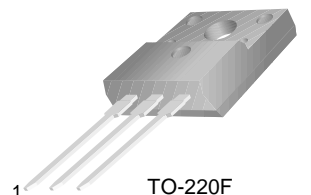


KSB1098

Low Frequency Power Amplifier

- Low Speed Switchng Industrial Use
- Complement to KSD1589



TO-220F
1.Base 2.Collector 3.Emitter

PNP Silicon Darlington Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	- 100	V
V_{CEO}	Collector-Emitter Voltage	- 100	V
V_{EBO}	Emitter-Base Voltage	- 7	V
I_C	Collector Current (DC)	- 5	A
I_{CP}	*Collector Current (Pulse)	- 8	A
I_B	Base Current	- 0.5	A
P_C	Collector Dissipation ($T_a=25^\circ\text{C}$)	2	W
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	20	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

* $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 10\%$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = - 100\text{V}$, $I_E = 0$			- 1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = - 5\text{V}$, $I_C = 0$			- 3	mA
h_{FE1} h_{FE2}	* DC Current Gain	$V_{CE} = - 2\text{V}$, $I_C = - 3\text{A}$ $V_{CE} = - 2\text{V}$, $I_C = - 5\text{A}$	2000 500		15K	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = - 3\text{A}$, $I_B = - 3\text{mA}$			- 1.5	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = - 3\text{A}$, $I_B = - 3\text{mA}$			- 2	V
t_{ON}	Turn ON Time	$V_{CC} = - 50\text{V}$, $I_C = - 3\text{A}$		0.5		μs
t_{STG}	Storage Time	$I_{B1} = - I_{B2} = - 3\text{mA}$		1		μs
t_F	Fall Time	$R_L = 17\Omega$		1		μs

* Pulse Test: $PW \leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$ Pulsed

h_{FE} Classification

Classification	R	O	Y
h_{FE1}	2000 ~ 5000	3000 ~ 7000	5000 ~ 15000

Typical Characteristics

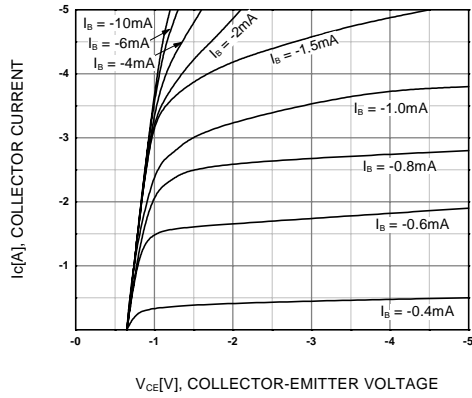


Figure 1. DC current Gain

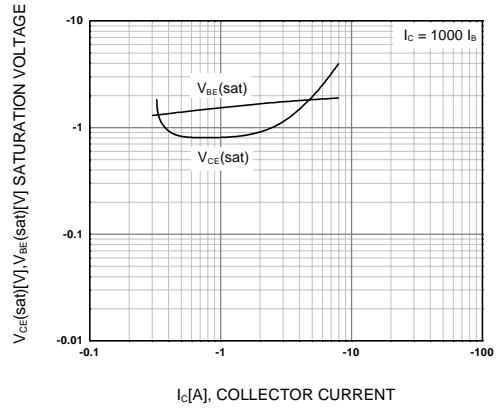


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

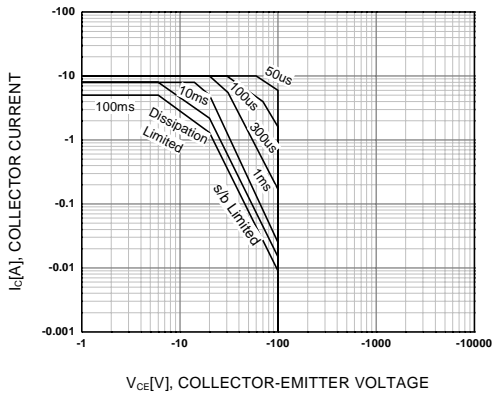


Figure 3. Safe Operating Area

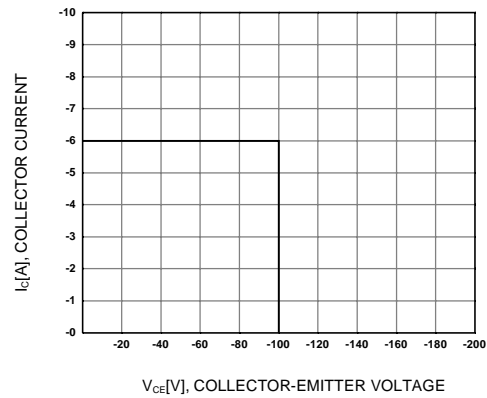


Figure 4. Reverse Bias Safe Operating Area

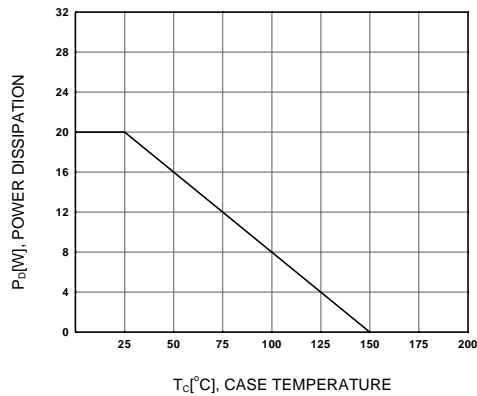


Figure 5. Power Derating

Package Dimensions

KSB1098

TO-220F



Dimensions in Millimeters

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