

LOW FREQUENCY POWER AMPLIFIER
LOW SPEED SWITCHING
INDUSTRIAL USE

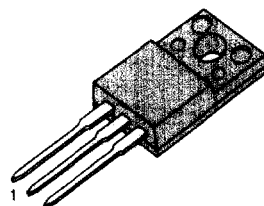
• Complement to KSB1098

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CB0}	150	V
Collector Emitter Voltage	V_{CEO}	100	V
Emitter Base Voltage	V_{EB0}	7	V
Collector Current (DC)	I_C	5	A
*Collector Current (Pulse)	I_C	8	A
Base Current	I_B	0.5	V
Collector Dissipation ($T_A=25^\circ\text{C}$)	P_C	1.5	W
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	20	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ\text{C}$

* $PW \leq 10\text{ms}$, Duty Cycle $\leq 50\%$

TO-220F



1. Base 2. Collector 3. Emitter

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$)

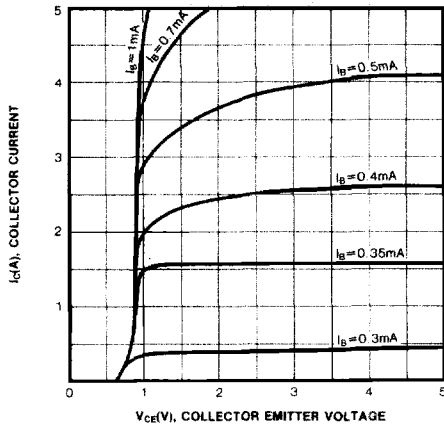
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 100\text{V}$, $I_E = 0$			1	μA
*DC Current Gain	h_{FE1}	$V_{CE} = 2\text{V}$, $I_C = 3\text{A}$	2000	6000	15K	
	h_{FE2}	$V_{CE} = 2\text{V}$, $I_C = 5\text{A}$	500			
*Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3\text{A}$, $I_B = 3\text{mA}$		0.9	1.5	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 3\text{A}$, $I_B = 3\text{mA}$		1.6	2	V
Turn On Time	t_{ON}	$I_C = 3\text{A}$, $R_L = 16.7\Omega$		1		μs
Storage Time	t_{stg}	$I_{B1} = -I_{B2} = 3\text{mA}$		3.5		μs
Fall Time	t_f	$V_{CC} = 50\text{V}$		1.2		μs

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

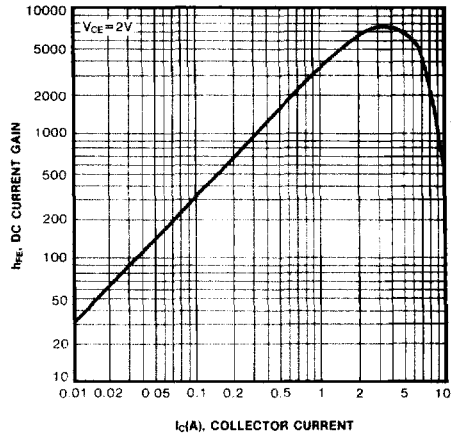
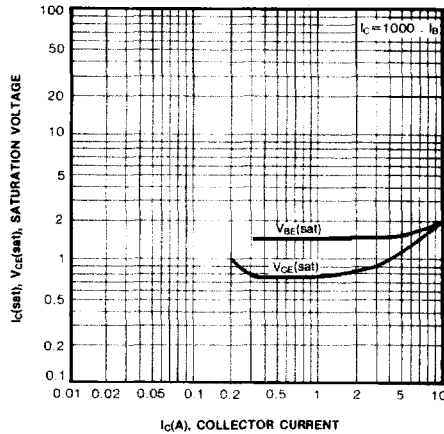
$h_{FE}(1)$ CLASSIFICATION

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

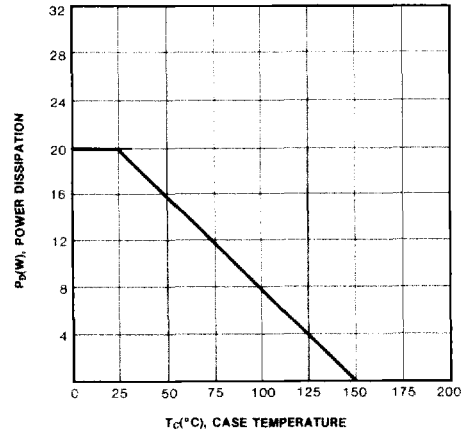
STATIC CHARACTERISTIC



DC CURRENT GAIN

BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE

POWER DERATING



SAFE OPERATING AREA

