

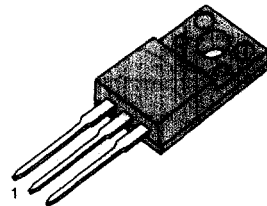
LOW FREQUENCY POWER AMPLIFIER

- Low Collector Emitter Saturation Voltage
- Complement to KSB1015

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	60	V
Emitter Base Voltage	V_{EBO}	7	V
Collector Current	I_C	3	A
Base Current	I_B	0.5	A
Collector Dissipation ($T_C=25^\circ\text{C}$)	P_C	25	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ\text{C}$

TO-220F



1. Base 2. Collector 3. Emitter

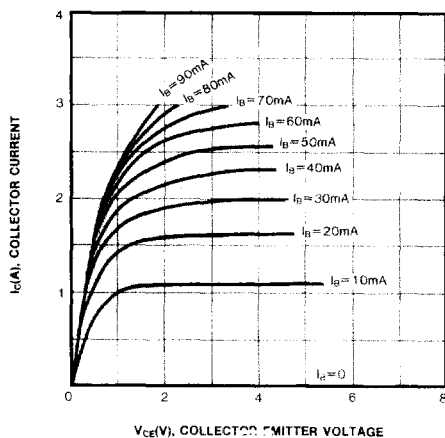
ELECTRICAL CHARACTERISTICS ($T_C=25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Emitter Breakdown Voltage	BV_{CBO}	$I_C = 50\text{mA}, I_B = 0$	60			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 60\text{V}, I_E = 0$			100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 7\text{V}, I_C = 0$			100	μA
Emitter Cutoff Current	h_{FE1}	$V_{CE} = 5\text{V}, I_C = 0.5\text{A}$	60		300	
	h_{FE2}	$V_{CE} = 5\text{V}, I_C = 3\text{A}$	20			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3\text{A}, I_B = 0.3\text{A}$		0.4	1	V
Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = 5\text{V}, I_C = 0.5\text{A}$		0.7	1	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 5\text{V}, I_C = 0.5\text{A}$		3		MHz
Output Capacitance	C_{OB}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		70		pF
Turn On Time	t_{ON}	$I_B1 = -I_B2 = 0.2\text{A}$		0.8		μs
Storage Time	t_{STG}	$V_{CC} = 30\text{V}$		1.5		μs
Fall Time	t_F			0.8		μs

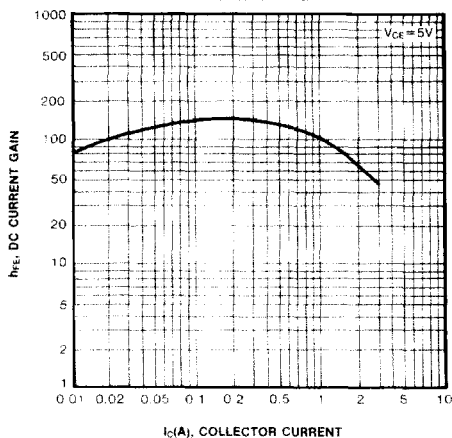
 $h_{FE}(1)$ CLASSIFICATION

Classification	O	Y	G
h_{FE1}	60 ~ 120	100 ~ 200	150 ~ 300

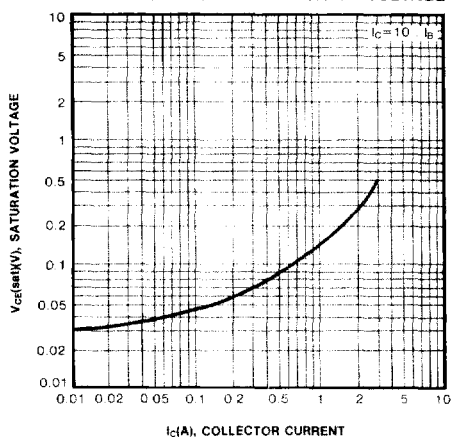
STATIC CHARACTERISTIC



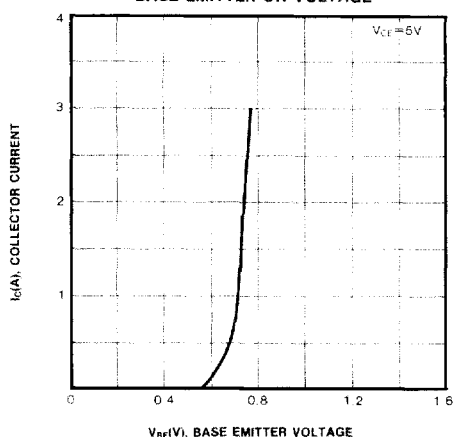
DC CURRENT GAIN



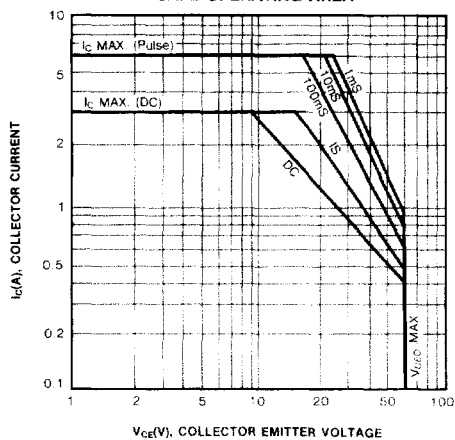
COLLECTOR-EMITTER SATURATION VOLTAGE



BASE-EMITTER ON VOLTAGE



SAFE OPERATING AREA



POWER DERATING

