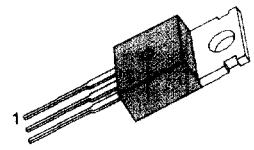
LOW FREQUENCY POWER AMPLIFIER

• Complement to KSB834

TO-220



1. Base 2. Collector 3. Emitter

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	0.3	A
Collector Dissipation (T_C=25℃)	P_C	30	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 ~ 150	℃

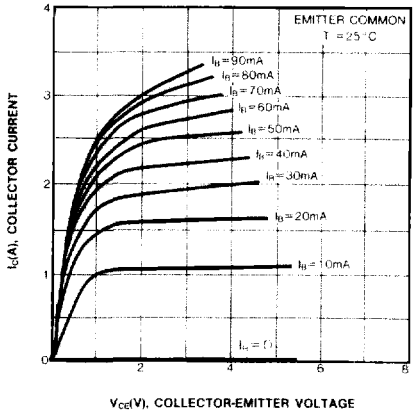
ELECTRICAL CHARACTERISTICS (Tc =25℃)

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

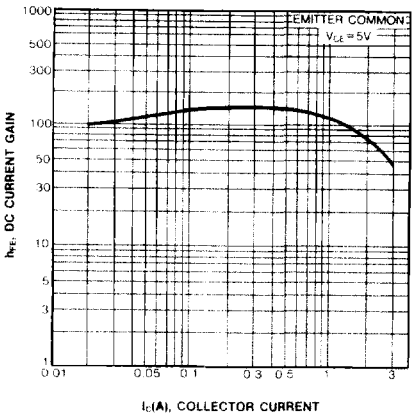
$h_{FE}(1)$ CLASSIFICATION

Classification	O	Y	G
h_{FE} (1)	60 - 120	100 - 200	150 - 300

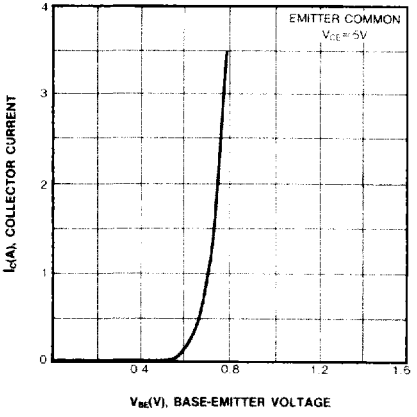
STATIC CHARACTERISTIC



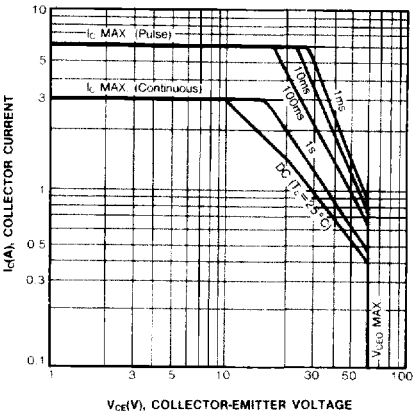
DC CURRENT GAIN



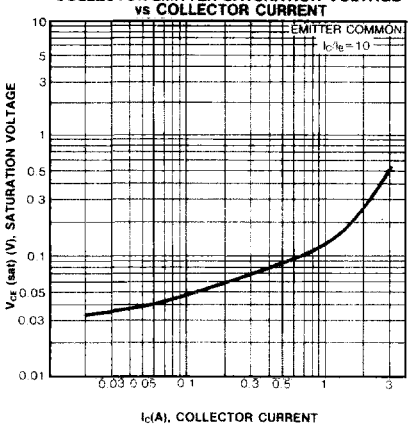
BASE-EMITTER ON VOLTAGE



SAFE OPERATING AREA



COLLECTOR-EMITTER SATURATION VOLTAGE vs COLLECTOR CURRENT



POWER DERATING