

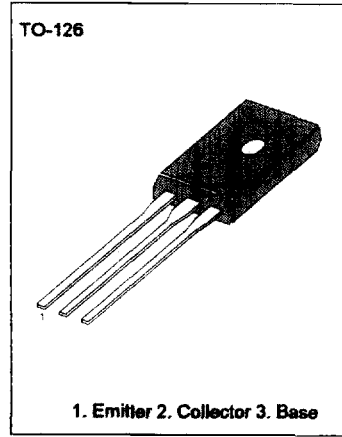
AUDIO FREQUENCY POWER AMPLIFIER

• Complement to KSB744/KSB744A

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector- Base Voltage	V_{CBO}	70	V
Collector-Emitter Voltage : KSD794	V_{CEO}	45	V
: KSD794A		60	V
Emitter- Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	3	A
*Collector Current (Pulse)	I_C	5	A
Base Current (DC)	I_B	0.6	A
Collector Dissipation ($T_A=25^\circ C$)	P_C	1	W
Collector Dissipation ($T_C=25^\circ C$)	P_C	10	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ C$

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



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

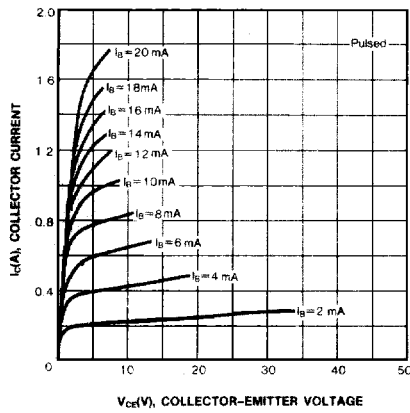
Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 45V, I_E = 0$			1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 3V, I_C = 0$			1	μA
* DC Current Gain	h_{FE1}	$V_{CE} = 5V, I_C = 20mA$	30	70		
	h_{FE2}	$V_{CE} = 5V, I_C = 0.5A$	60	100	320	
* Collector Emitter Saturation Voltage	$V_{CE(Sat)}$	$I_C = 1.5A, I_B = 0.15A$		0.3	2	V
* Base Emitter Saturation Voltage	$V_{BE(Sat)}$	$I_C = 1.5A, I_B = 0.15A$		0.8	2	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 5V, I_E = 0.1A$		60		MHz
Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		40		pF

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

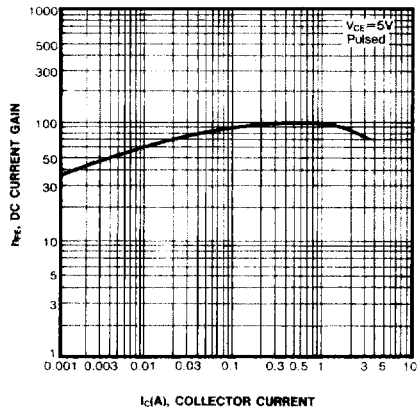
$h_{FE(2)}$ CLASSIFICATION

Classification	R	O	Y
$h_{FE(2)}$	60 - 120	100 - 200	160 - 320

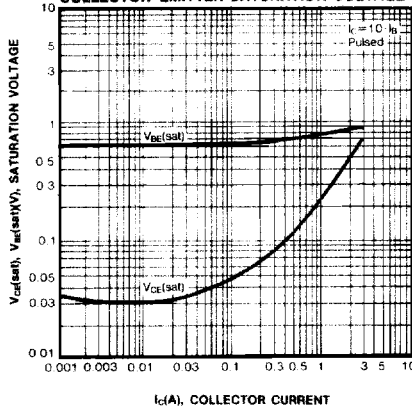
STATIC CHARACTERISTIC



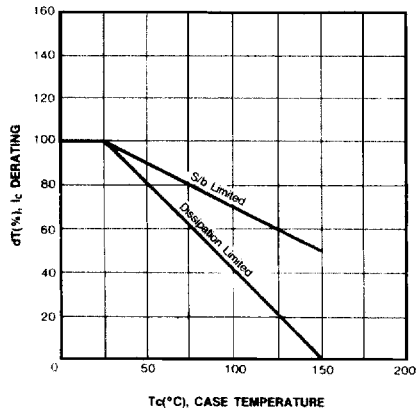
DC CURRENT GAIN



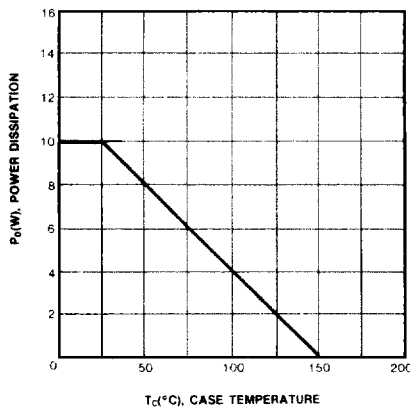
BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



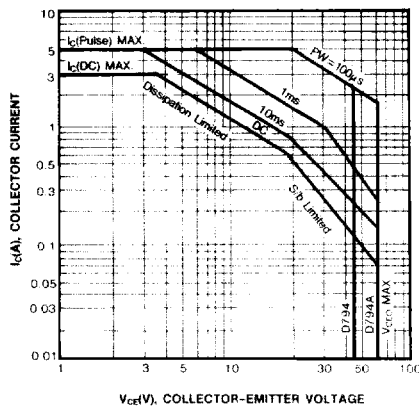
DERATING CURVE OF SAFE OPERATING AREAS



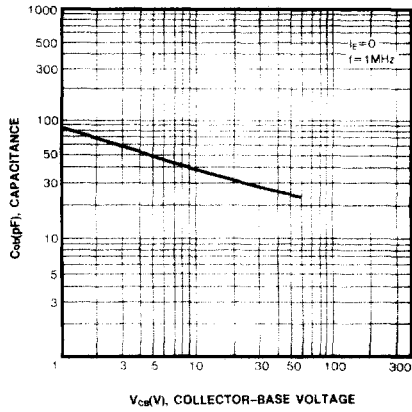
POWER DERATING



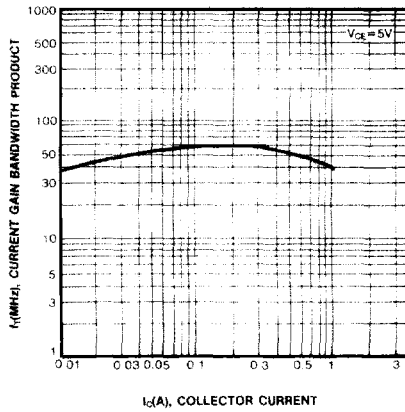
SAFE OPERATING AREA



COLLECTOR OUTPUT CAPACITANCE



CURRENT GAIN BANDWIDTH PRODUCT



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