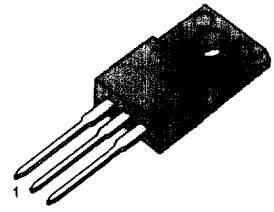
POWER AMPLIFIER APPLICATIONS

• Complement to KSB1017

TO-220F



1 . Base 2. Collector 3. Emitter

ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Rating	Unit
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	80	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	4	A
Base Current	I_B	0.4	A
Collector Dissipation (T_C=25℃)	P_C	25	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55 ~ 150	℃

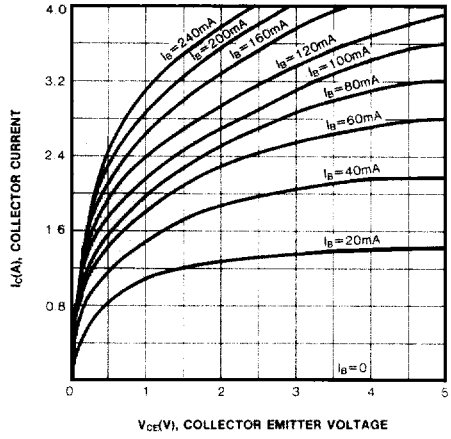
ELECTRICAL CHARACTERISTICS (T_c =25℃)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Emitter Breakdown Voltage	BV_{CBO}	I_C = 50mA, I_B = 0	80			V
Collector Cutoff Current	I_{CBO}	V_{CB} = 80V, I_E = 0			30	uA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 5V, I_C = 0			100	uA
DC Current Gain	$h_{FE}1$	V_{CE} = 5V, I_C = 0.5A	40		240	
	$h_{FE}2$	V_{CE} = 5V, I_C = 3A	15	50		
Collector Emitter Saturation Voltage	V_{CE}(sat)	I_C = 3A. I_B = 0.3A		0.45	1.5	V
Base Emitter On Voltage	V_{BE}(on)	V_{CE} = 5V, I_C = 3A		1	1.5	V
Current Gain Bandwidth Product	f_T	V_{CE} = 5V, I_C = 0.5A		8		MHz
Output Capacitance	C_{OB}	V_{CB} = 10V, f = 1MHz		90		pF

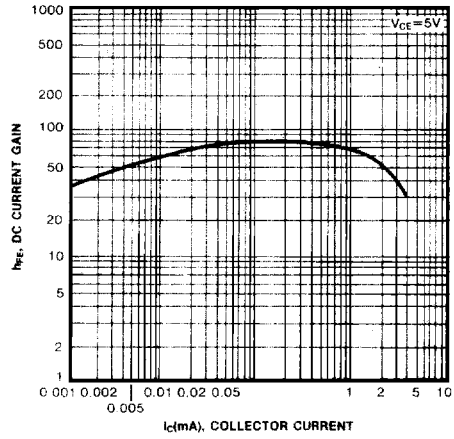
h_{FE}(1) CLASSIFICATION

Classification	R	O	Y
$h_{FE}1$	40 ~ 80	70 ~ 140	120 ~ 240

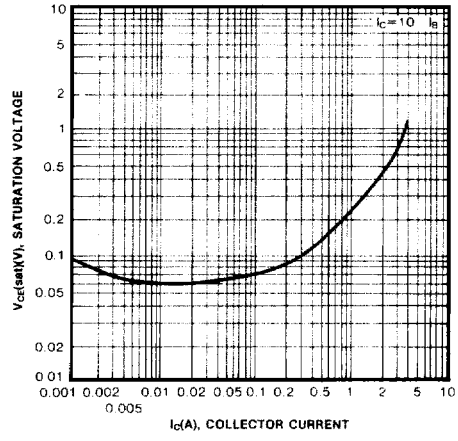
STATIC CHARACTERISTIC



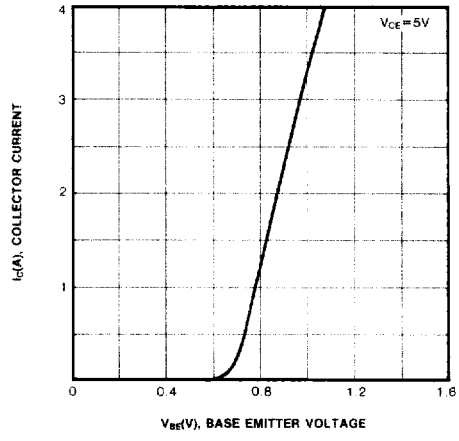
DC CURRENT GAIN



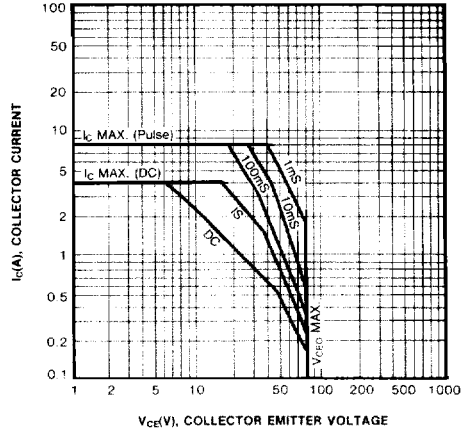
COLLECTOR EMITTER SATURATION VOLTAGE



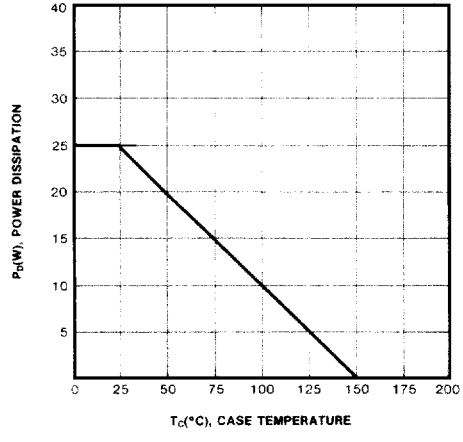
BASE EMITTER ON VOLTAGE



SAFE OPERATING AREA



POWER DERATING



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SAMSUNG ELECTRONICS