2SB861 TRANSISTOR (PNP)

TO-220C

1.BASE
2.COLLECTOR
3.EMITTER

FEATURES

- Low Frequency Power Amplifier Color TV Vertical Deflection Output

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-200	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-2	A
P_C	Collector Power Dissipation	1.8	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	69	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

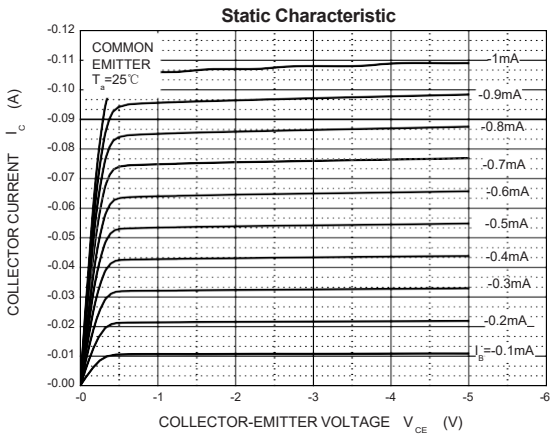
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

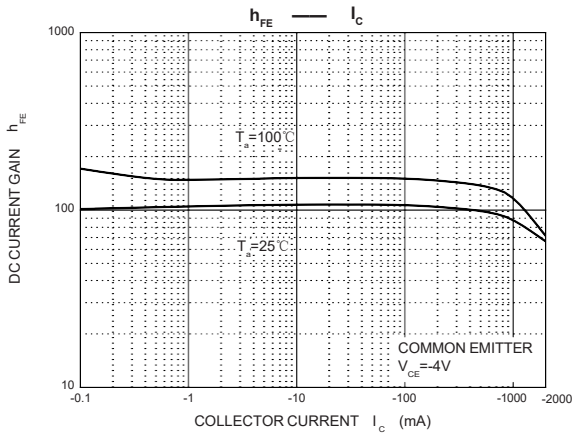
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-5mA,I_E=0	-200			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=-50mA,I_B=0	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-5mA,I_C=0	-6			V
Collector cut-off current	I_{CBO}	V_{CB}=-120V,I_E=0			-1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V,I_C=0			-1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=-4V, I_C=-50mA	60		200	
	$h_{FE(2)}$*	V_{CE}=-10V, I_C=-500mA	60			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-500mA,I_B=-50mA			-3	V
Base-emitter voltage	V_{BE}	V_{CE}=-4V, I_C=-50mA			-1	V
Collector output capacitance	C_{ob}	V_{CB}=-10V,I_E=0, f=1MHz		30		pF

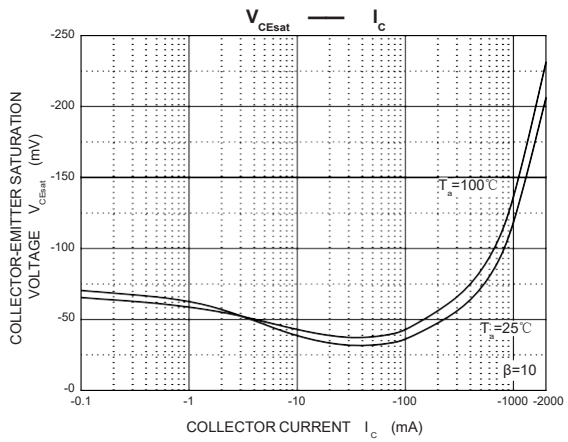
*Pulse test

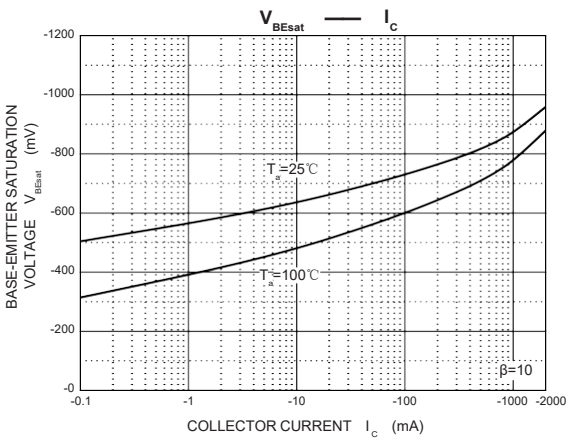
CLASSIFICATION OF $h_{FE(1)}$

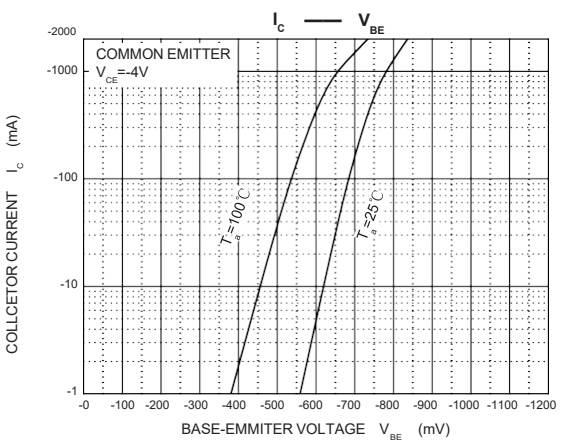
RANK	B	C
RANGE	60-120	100-200

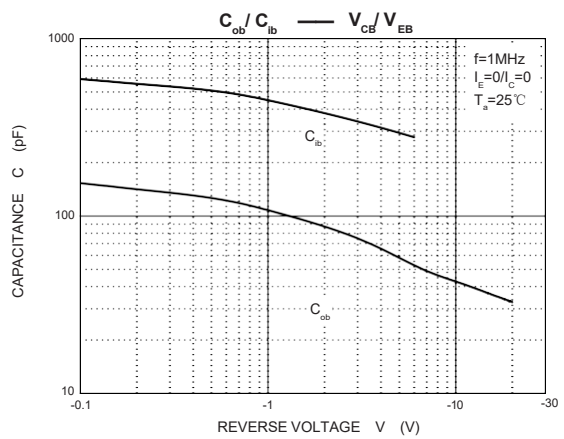

Static Characteristic
COMMON EMITTER
T_a=25℃
-1mA
-0.9mA
-0.8mA
-0.7mA
-0.6mA
-0.5mA
-0.4mA
-0.3mA
-0.2mA
I_B=-0.1mA
COLLECTOR CURRENT I_C (A)
COLLECTOR-EMITTER VOLTAGE V_CE (V)

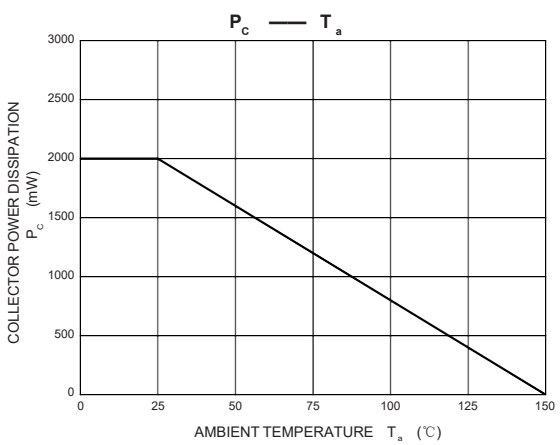

h_FE — I_C
T_a=100℃
T_a=25℃
COMMON EMITTER
V_CE=-4V
DC CURRENT GAIN h_FE
COLLECTOR CURRENT I_C (mA)


V_CEsat — I_C
T_a=100℃
T_a=25℃
β=10
COLLECTOR-EMITTER SATURATION VOLTAGE V_CEsat (mV)
COLLECTOR CURRENT I_C (mA)


V_BEsat — I_C
T_a=25℃
T_a=100℃
β=10
BASE-EMITTER SATURATION VOLTAGE V_BEsat (mV)
COLLECTOR CURRENT I_C (mA)


I_C — V_BE
COMMON EMITTER
V_CE=-4V
T_a=100℃
T_a=25℃
COLLCETOR CURRENT I_C (mA)
BASE-EMMITER VOLTAGE V_BE (mV)


C_ob / C_ib — V_CB / V_EB
f=1MHz
I_E=0/I_C=0
T_a=25℃
C_ib
C_ob
CAPACITANCE C (pF)
REVERSE VOLTAGE V (V)


P_C — T_a
COLLECTOR POWER DISSIPATION P_C (mW)
AMBIENT TEMPERATURE T_a (℃)