2SD1761 TRANSISTOR (NPN)

TO-220F

1.BASE
2.COLLECTOR
3.EMITTER

FEATURES

- Low Collector Saturation Voltage: $V_{ce(sat)}$=0.3V(Typ.),I_C/I_B=2A/0.2A
- Excellent Current Characteristics of DC Current Gain.
- Large Collector Power Dissipation: P_C=30W(T_C=25℃)
- Complementary Pair with 2SB1187

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Power dissipation	2	W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55-150	℃

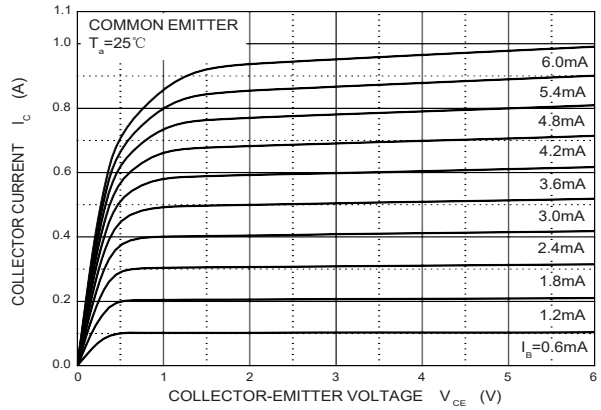
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=50uA, I_E=0	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=50uA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=60V,I_E=0			10	uA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0			10	uA
DC current gain	$h_{FE(1)}$	V_{CE}=5V,I_C=0.5A	60		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=2A,I_B=0.2A			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=2A,I_B=0.2A			1.5	V
Transition frequency	f_T	V_{CE}=5V,I_C=0.5A		8		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz		90		pF

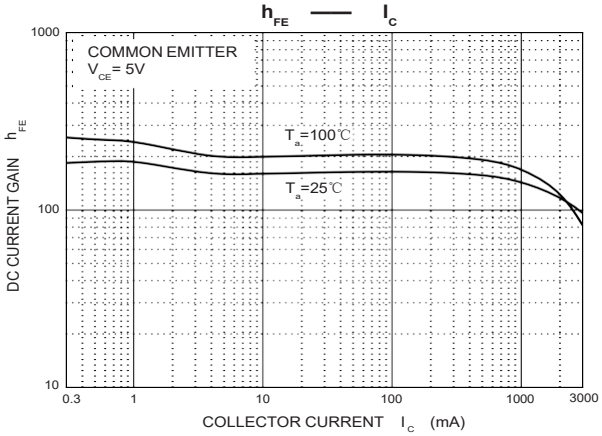
CLASSIFICATION OF $h_{FE(1)}$

Rank	D	E	F
Range	60-120	100-200	160-320

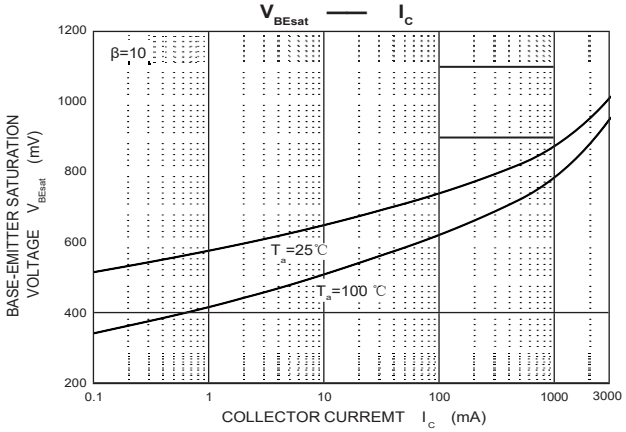
Static Characteristic



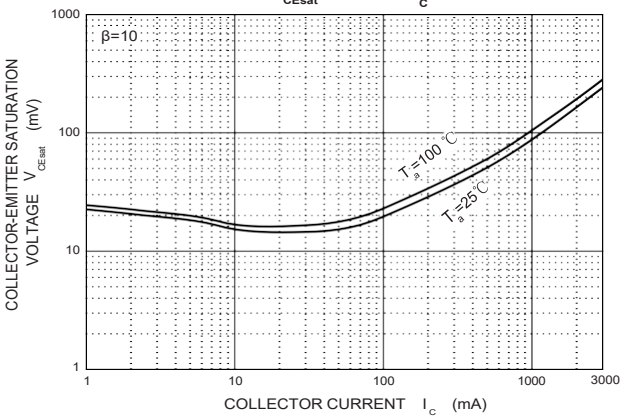
h_{FE} —— I_C



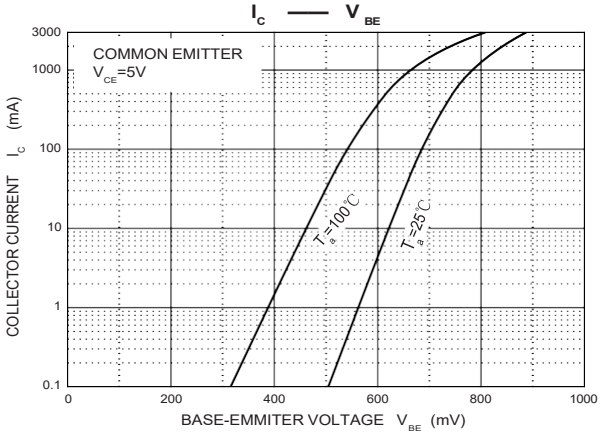
V_{BEsat} —— I_C



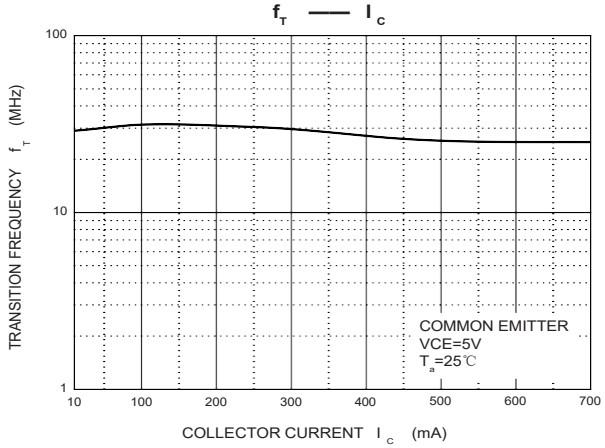
V_{CEsat} —— I_C



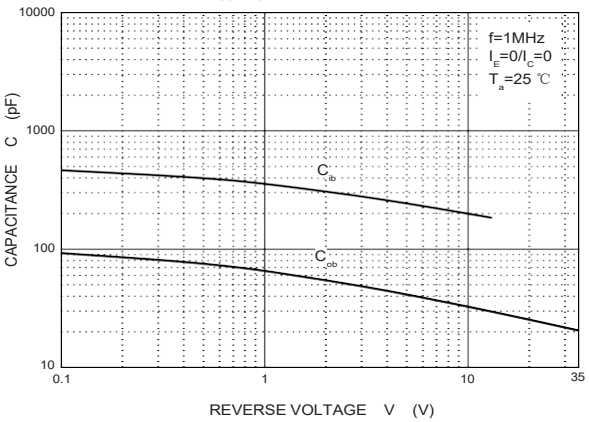
I_C —— V_{BE}



f_T —— I_C



C_{ob}/C_{ib} —— V_{CB}/V_{EB}



P_C —— T_a