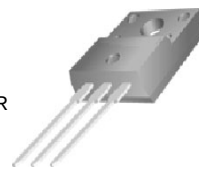


**TO-220F Plastic-Encapsulate Transistors****2SD1761** TRANSISTOR (NPN)**FEATURES**

- 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: $P_C=30W(T_C=25^{\circ}C)$
- Complementary pair with 2SB1187

TO-220F

1. BASE
2. COLLECTOR
3. EMITTER

**MAXIMUM RATINGS ($T_A=25^{\circ}C$ unless otherwise noted)**

Symbol	Parameter	Value	Units
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	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-55-150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			10	μA
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

Typical Characteristics

2SD1761

