

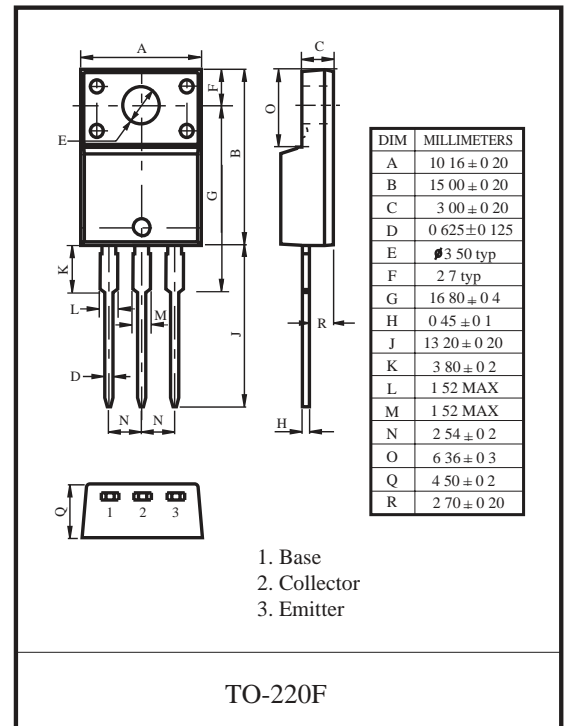
FTC5171 TRANSISTOR (NPN)

FEATURES

- Extremely Satisfactory Linearity of the Forward Current Transfer Ratio h_{FE}
- Wide Safe Operation Area
- General power and driver stage amplifier applications.
- Full-pack Package which can be Installed to the Heat Sink with One Screw.

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

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	180	V
Collector to Emitter Voltage	V_{CEO}	180	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	2.0	A
Base Current - Continuous	I_B	1.0	A
Collector Power Dissipation	P_C	2.0	W
Collector Power Dissipation	$P_C(T_c=25^\circ\text{C})$	20	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$



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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=10\text{mA}$ $I_B=0$	180			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=180\text{V}$ $I_E=0$			5.0	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0\text{V}$ $I_C=0$			5.0	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0\text{V}$ $I_C=100\text{mA}$	100		320	
	$h_{FE(2)}$	$V_{CE}=5.0\text{V}$ $I_C=1.0\text{A}$	50			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1.0\text{A}$ $I_B=100\text{mA}$		0.16	1.0	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=5.0\text{V}$ $I_C=1.0\text{A}$		0.68	1.5	V
Transition Frequency	f_T	$V_{CE}=5.0\text{V}$ $I_C=300\text{mA}$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}$ $f=1.0\text{MHz}$ $I_E=0$		16		pF

