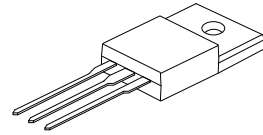


NPN SILICON TRANSISTOR

NPN SILICON TRANSISTOR

■ FEATURES

- *High transition frequency
- *Power amplifier applications
- *Driver stage amplifier applications



TC 220F

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless others specified)

PARAMETER			SYMBOL	RATINGS	UNIT
Collector-Base Voltage			V _{CBO}	150 ~ 230	V
Collector-Emitter Voltage			V _{CEO}	150 ~ 230	V
Emitter-Base Voltage			V _{EBO}	5	V
Collector Current			I _C	1	A
Base Current			I _B	0.1	A
Collector Power Dissipation	T _A =25°C	TO-220F	P _C	2.0	W
		TO-126		1.4	W
	T _C =25°C	TO-220F		20	W
		TO-126		16	W
Junction Temperature			T _J	+150	°C
Storage Temperature Range			T _{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless others specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=10\text{mA}$, $I_B=0$	150		230	V
Base -Emitter Voltage	V_{BE}	$V_{CE}=5\text{V}$, $I_C=500\text{mA}$			1.0	V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=500\text{mA}$, $I_B=50\text{mA}$			1.5	V
Collector Cut-off Current	I_{CBO}	$V_{CB}=230\text{V}$, $I_E=0$			1.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$			1.0	μA
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}$, $I_C=100\text{mA}$	100		320	
Transition Frequency	f_T	$V_{CE}=10\text{V}$, $I_C=100\text{mA}$		100		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$		20		pF

■ CLASSIFICATION OF h_{FE}

RANK	A	B
RANGE	100-200	180-320

TYPICAL CHARACTERISTICS

