

1. BASE
2. COLLECTOR
3. EMITTER

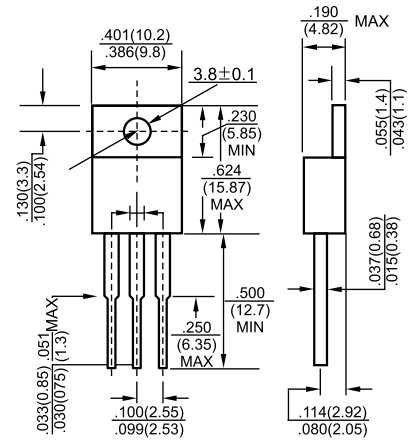
TO-220

Features

- ✧ power switching applications

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

Symbol	Parameter	Value	Units
V_{CB0}	Collector-Base Voltage	700	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current -Continuous	12	A
P_C	Collector Power Dissipation	2	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$



Dimensions in inches and (millimeters)

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	700			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	9			V
Collector cut-off current	I_{CBO}	$V_{CB} = 700\text{V}, I_E = 0$			100	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 400\text{V}, I_B = 0$			100	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 9\text{V}, I_C = 0$			100	μA
DC current gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 3\text{A}$	8		40	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 8\text{A}, I_B = 1.6\text{A}$			1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 8\text{A}, I_B = 1.6\text{A}$			1.6	V
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 500\text{mA}, f = 1\text{MHz}$	4			MHz
Fall time	t_f	$I_C = 8\text{A}, I_{B1} = -I_{B2} = 1.6\text{A}$			0.9	μs
Storage time	t_s	$V_{CC} = 125\text{V}$			4	μs

CLASSIFICATION OF h_{FE}

Rank						
Range	8-15	15-20	20-25	25-30	30-35	35-40

Typical Characteristics

