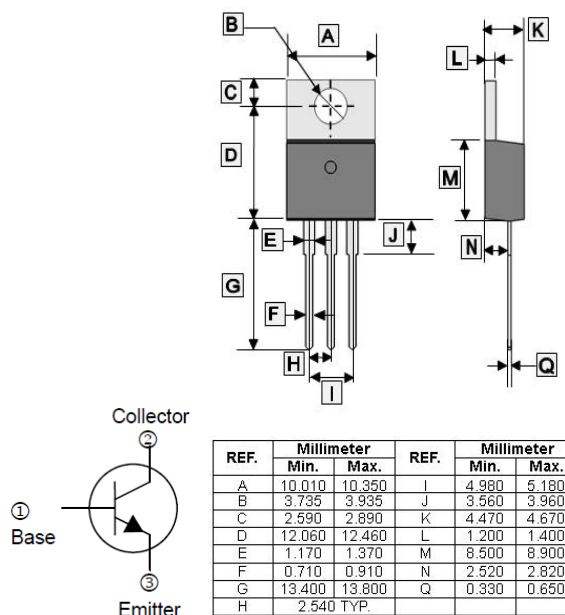


RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Power switching applications

TO-220J



## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V <sub>CB0</sub>	700	V
Collector to Emitter Voltage	V <sub>CEO</sub>	400	V
Emitter to Base Voltage	V <sub>EBO</sub>	9	V
Collector Current - Continuous	I <sub>C</sub>	4	A
Collector Power Dissipation	P <sub>C</sub>	2	W
Junction, Storage Temperature	T <sub>J</sub> , T <sub>STG</sub>	150, -55~150	°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Collector to Base Breakdown Voltage	V <sub>(BR)CB0</sub>	700	-	-	V	I <sub>C</sub> =1mA, I <sub>E</sub> =0
Collector to Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	400	-	-	V	I <sub>C</sub> =10mA, I <sub>B</sub> =0
Emitter to Base Breakdown Voltage	V <sub>(BR)EBO</sub>	9	-	-	V	I <sub>E</sub> =1mA, I <sub>C</sub> =0
Collector Cut – Off Current	I <sub>CB0</sub>	-	-	1	mA	V <sub>CB</sub> =700V, I <sub>E</sub> =0
	I <sub>CEO</sub>	-	-	0.1		V <sub>CE</sub> =400V, I <sub>B</sub> =0
Emitter Cut – Off Current	I <sub>EBO</sub>	-	-	0.05	mA	V <sub>EB</sub> =7V, I <sub>C</sub> =0
DC Current Gain	h <sub>FE</sub>	20	-	30		V <sub>CE</sub> =5V, I <sub>C</sub> =1A
		5	-	-		V <sub>CE</sub> =5V, I <sub>C</sub> =10mA
Collector to Emitter Saturation Voltage	V <sub>CE(sat)1</sub>	-	-	0.3	V	I <sub>C</sub> =1A, I <sub>B</sub> =0.2A
	V <sub>CE(sat)2</sub>	-	-	0.8	V	I <sub>C</sub> =4A, I <sub>B</sub> =1A
Base to Emitter Saturation Voltage	V <sub>BE(sat)</sub>	-	-	1.6	V	I <sub>C</sub> =2A, I <sub>B</sub> =0.5A
Transition Frequency	f <sub>T</sub>	5	-	-	MHZ	V <sub>CE</sub> =10V, I <sub>C</sub> =500mA, f=1MHZ
Fall time	t <sub>F</sub>	-	-	0.6	µs	I <sub>B1</sub> =-I <sub>B2</sub> =0.4A, I <sub>C</sub> =2A, V <sub>CC</sub> =120V
Storage time	t <sub>S</sub>	1.8	-	6.6	µs	I <sub>C</sub> =0.25A