Elektronische Bauelemente

2N4400

0.6 A, 60 V

NPN Plastic Encapsulated Transistor

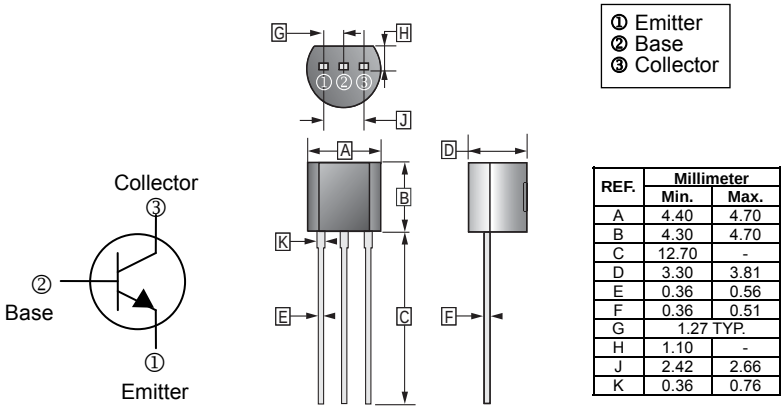
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

- General Purpose Amplifier Transistor

TO-92



REF.	Millimeter	
	Min.	Max.
A	4.40	4.70
B	4.30	4.70
C	12.70	-
D	3.30	3.81
E	0.36	0.56
F	0.36	0.51
G	1.27 TYP.	
H	1.10	-
J	2.42	2.66
K	0.36	0.76

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	60	V
Collector to Emitter Voltage	V_{CEO}	40	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	0.6	A
Collector Power Dissipation	P_C	625	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	200	°C / W
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	60	-	-	V	I_C= 0.1mA, I_E = 0A
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$ *	40	-	-	V	I_C= 1mA, I_B = 0A
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	I_E= 0.1mA, I_C = 0A
Collector Cut-Off Current	I_{CBO}	-	-	0.1	μA	V_{CB}= 60V, I_E = 0 A
Emitter Cut-Off Current	I_{EBO}	-	-	0.1	μA	V_{EB}= 6V, I_C =0 mA
DC Current Gain	h_{FE} *	20	-	-		V_{CE}= 1V, I_C= 1mA
		40	-	-		V_{CE}= 1V, I_C= 10mA
		50	-	150		V_{CE}= 1V, I_C= 150mA
		20	-	-		V_{CE}= 2V, I_C= 500mA
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$ *	-	-	0.4	V	I_C= 150mA, I_B= 15mA
		-	-	0.75		I_C= 500mA, I_B= 50mA
Base to Emitter Saturation Voltage	$V_{BE(sat)}$ *	0.75	-	0.95	V	I_C= 150mA, I_B=15mA
		-	-	1.2		I_C= 500mA, I_B= 50mA
Collector output Capacitance	C_{ob}	-	-	6.5	pF	V_{CB} = 5V, I_E = 0A, f=1MHz
Emitter input Capacitance	C_{ib}	-	-	30	pF	V_{EB} = 5V, I_C = 0A, f=1MHz
Transition Frequency	f_T *	200	-	-	MHz	V_{CE} = 10V, I_C = 20mA, f=100MHz

*Pulse test：Pulse Width ≦ 300 μs, Duty Cycle ≦ 2.0%.