

DESCRIPTION The JE9014 is designed for use in pre-amplifier of low level and low noise.

- FEATURES**
- High total power dissipation. (P_T : 625 mW)
 - Complementary to JE9015.
 - High h_{FE} and good linearity.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures

Storage Temperature - 55 to +150 °C

Junction Temperature +150 °C Maximum

Maximum Power Dissipation ($T_a = 25$ °C)

Total Power Dissipation 450 mW

Maximum Voltages and Currents ($T_a = 25$ °C)

V_{CBO} Collector to Base Voltage 50 V

V_{CEO} Collector to Emitter Voltage 45 V

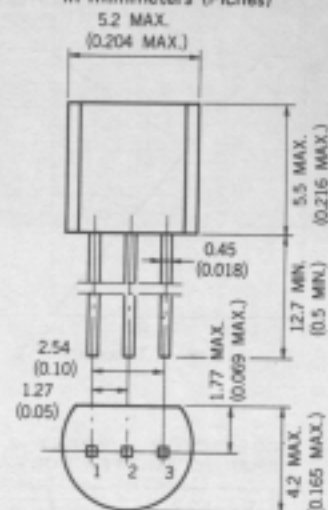
V_{EBO} Emitter to Base Voltage 5.0 V

I_C Collector Current 100 mA

I_B Base Current 100 mA

PACKAGE DIMENSIONS

in millimeters (inches)



1. EMITTER EIAJ : SC-43A
2. BASE JEDEC : TO-92
3. COLLECTOR IEC : PA33

ELECTRICAL CHARACTERISTICS ($T_a = 25$ °C)

SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE}	DC Current Gain	60	280	1000	—	$V_{CE} = 5.0$ V, $I_C = 1.0$ mA
C_{ob}	Collector to Base Capacitance		2.2	3.5	pF	$V_{CB} = 10$ V, $I_E = 0$, $f = 1.0$ MHz
NF	Noise Figure		0.9	10	dB	$V_{CE} = 5.0$ V, $I_C = 0.2$ mA, $R_G = 2.0$ k Ω , $f = 1.0$ kHz, $\Delta f = 200$ Hz
f_T	Gain Bandwidth Product	150	270		MHz	$V_{CE} = 5.0$ V, $I_C = 10$ mA
I_{CBO}	Collector Cutoff Current			50	nA	$V_{CB} = 50$ V, $I_E = 0$
I_{EBO}	Emitter Cutoff Current			50	nA	$V_{EB} = 5.0$ V, $I_C = 0$
BV_{CBO}	Collector to Base Breakdown Voltage	50			V	$I_C = 0.1$ mA, $I_E = 0$
BV_{CEO}	Collector to Emitter Breakdown Voltage	45			V	$I_C = 1.0$ mA, $I_B = 0$
BV_{EBO}	Emitter to Base Breakdown Voltage	5.0			V	$I_E = 0.1$ mA, $I_C = 0$
V_{BE}	Base to Emitter Voltage	0.58	0.63	0.70	V	$V_{CE} = 5.0$ V, $I_C = 2.0$ mA
$V_{CE(sat)}$	Collector Saturation Voltage		0.14	0.30	V	$I_C = 100$ mA, $I_B = 5.0$ mA
$V_{BE(sat)}$	Base Saturation Voltage		0.84	1.00	V	$I_C = 100$ mA, $I_B = 5.0$ mA

Classification of h_{FE}

Rank	A	B	C	D
Range	60 — 150	100 — 300	200 — 600	400 — 1000

h_{FE} Test Conditions : $V_{CE} = 5.0$ V, $I_C = 1.0$ mA