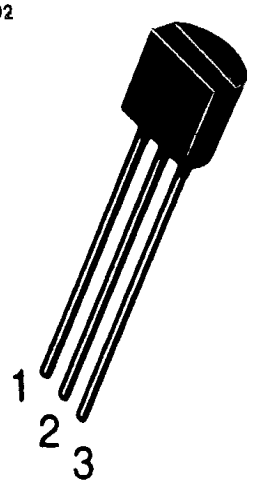
Transistors
2N5210

USHA (INDIA) LTD

AMPLIFIER TRANSISTOR

- **Collector-Emitter Voltage: V_{CEO} =50V**
- **Collector Dissipation: P_C (max)=625mW**

TO-92



1. Emitter 2. Base 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a =25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	4.5	V
Collector Current	I_C	50	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_j	150	°C
Storage Temperature	Tstg	−55 ~ 150	°C

- Refer to 2N5088 for graphs

ELECTRICAL CHARACTERISTICS (T_a =25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 100\mu A$, $I_E = 0$	50			V
*Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 1mA$, $I_B = 0$	50			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 35V$, $I_E = 0$			50	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 3V$, $I_C = 0$			50	nA
DC Current Gain	h_{FE}	$V_{CE} = 5V$, $I_C = 100\mu A$	200		600	
		$V_{CE} = 5V$, $I_C = 1mA$	250			
		*$V_{CE} = 5V$, $I_C = 10mA$	250			
Collector-Emitter Saturation Voltage	$V_{CE}(sat)$	$I_C = 10mA$, $I_B = 1mA$			0.7	V
Base-Emitter On Voltage	$V_{BE}(on)$	$I_C = 1mA$, $V_{CE} = 5V$			0.85	V
Collector-Base Capacitance	C_{CB}	$V_{CB} = 5V$, $I_E = 0$ f = 100KHz			4	pF
Current Gain Bandwidth Product	f_T	$V_{CE} = 5V$, $I_C = 500\mu A$ f = 20MHz	30			MHz
Noise Figure	N_F	$V_{CE} = 5V$, $I_C = 20\mu A$ $R_S = 22K\Omega$ f = 10Hz to 15.7KHz			2	dB
		$V_{CE} = 5V$, $I_C = 20\mu A$ $R_S = 10K\Omega$, f = 1KHz			3	dB

* Pulse Test: Pulse Width ≤300μs, Duty Cycle ≤2%

ISO 14001 CERTIFIED
AN ISO 9002 COMPANY