

## TO-3P Plastic-Encapsulate Transistors

### 3DA5200A TRANSISTOR (NPN)

#### FEATURES

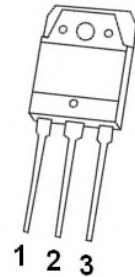
- High Breakdown Voltage
- High Current and Power Capacity

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

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	200	V
$V_{CEO}$	Collector-Emitter Voltage	200	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	15	A
$P_C$	Collector Power Dissipation	3	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	42	$^\circ\text{C/W}$
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^\circ\text{C}$

TO – 3P

1. BASE
2. COLLECTOR
3. EMITTER



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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$ 200				V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=50\text{mA}, I_B=0$ 200				V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$ 5				V
Collector cut-off current	$I_{CBO}$ V	$V_{CB}=200\text{V}, I_E=0$			5	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			5	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=5\text{V}, I_C=1\text{A}$ 55			160	
	$h_{FE(2)}$ V	$V_{CE}=5\text{V}, I_C=7\text{A}$ 35				
Collector-emitter saturation voltage	$V_{CE(sat)}$ I	$I_C=8\text{A}, I_B=800\text{mA}$			3	V
Base-emitter voltage	$V_{BE}$ V	$V_{CE}=5\text{V}, I_C=7\text{A}$			1.5	V
Collector output capacitance	$C_{ob}$ V	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	360			pF
Transition frequency	$f_T$ V	$V_{CE}=5\text{V}, I_C=1\text{A}$		30		MHz

#### CLASSIFICATION OF $h_{FE(1)}$

RANK R		O
RANGE	55-110	80-160