



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-251/TO-252-2L Plastic-Encapsulate Transistors

2SA1700 TRANSISTOR (PNP)

FEATURES

- High breakdown voltage
- Adoption of MBIT process
- Excellent h_{FE} linearity

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-400	V
V_{CEO}	Collector-Emitter Voltage	-400	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current –Continuous	-0.2	A
P_C	Collector Power Dissipation	1	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

TO-251
TO-252-2L



1.BASE

2.COLLECTOR

3.EMITTER



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -300\text{V}, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4\text{V}, I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -10\text{V}, I_C = -50\text{mA}$	60		200	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$			-0.8	V
Base- emitter saturation voltage	$V_{BE(sat)}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE} = -30\text{V}, I_C = -10\text{mA}$		70		MHz
Output Capacitance	C_{ob}	$V_{CB} = -30\text{V}, f = 1\text{MHz}$		5		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB} = -30\text{V}, f = 1\text{MHz}$		4		pF
Turn-on Time	t_{on}	$V_{CC} = -150\text{V}, I_{B1} = I_{B2} = -5\text{mA}, R_L = 3\text{K}\Omega$		0.25		μS
Turn-off Time	t_{off}			5		μS

CLASSIFICATION OF h_{FE}

Rank	D	E
Range	60-120	100-200

Typical Characteristics

2SA1700



