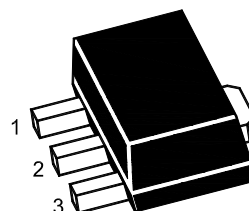


Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

FEATURE

- Switching and amplification in high voltage
Applications such as telephony
- Low current(max. 500mA)
- High voltage(max.160v)



1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

MARKING:5401

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-0.5	A
P_C	Collector Power Dissipation	0.5	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	$^{\circ}\text{C/W}$
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$, $I_E = 0$	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}$, $I_B = 0$	-150			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}	$V_{CB} = -120\text{V}$, $I_E = 0$			-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3\text{V}$, $I_C = 0$			-50	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = -5\text{V}$, $I_C = -1\text{mA}$	50			
	$h_{FE(2)}$	$V_{CE} = -5\text{V}$, $I_C = -10\text{mA}$	60		300	
	$h_{FE(3)}$	$V_{CE} = -5\text{V}$, $I_C = -50\text{mA}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10\text{mA}$, $I_B = -1\text{mA}$			-0.2	V
	$V_{CE(sat)}$	$I_C = -50\text{mA}$, $I_B = -5\text{mA}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10\text{mA}$, $I_B = -1\text{mA}$			-1	V
	$V_{BE(sat)}$	$I_C = -50\text{mA}$, $I_B = -5\text{mA}$			-1	V
Transition frequency	f_T	$V_{CE} = -10\text{V}$, $I_C = -10\text{mA}$, $f = 100\text{MHz}$	100		300	MHz
Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$			6	pF
Noise Figure	NF	$V_{CE} = -5.0\text{V}$, $I_C = -200\mu\text{A}$, $R_S = 10\Omega$, $f = 10\text{Hz}$ to 15.7kHz			8	dB

Typical Characteristics

