

Plastic-Encapsulate Transistors

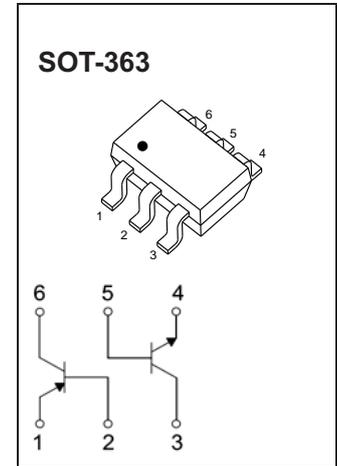
DUAL TRANSISTOR (PNP+NPN)

FEATURES

- Epitaxial Planar Die Construction
- Ideal for low Power Amplification and Switching
- One 5401(PNP),one 5551(NPN)

MAXIMUM RATINGS NPN 5551 (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector- Base Voltage	180	V
V _{CEO}	Collector-Emitter Voltage	160	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current -Continuous	0.2	A
P _C	Collector Power Dissipation	0.2	W
R _{θJA}	Thermal Resistance, Junction to Ambient	625	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C



ELECTRICAL CHARACTERISTICS NPN 5551 (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	180			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	160			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	6			V
Collector cut-off current	I _{CBO}	V _{CB} =120V, I _E =0			0.05	μA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0			0.05	μA
DC current gain	h _{FE1}	V _{CE} =5V, I _C =1mA	80			
	h _{FE2}	V _{CE} =5V, I _C =10mA	100		300	
	h _{FE3}	V _{CE} =5V, I _C =50mA	30			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =10mA, I _B =1mA			0.15	V
		I _C =50mA, I _B =5mA			0.2	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =10mA, I _B =1mA			1	V
		I _C =50mA, I _B =5mA			1	V
Output Capacitance	C _{obo}	V _{CB} = 10V, f = 1.0MHz, I _E = 0			6.0	pF
Current Gain-Bandwidth Product	f _T	V _{CE} = 10V, I _C = 10mA, f = 100MHz	100		300	MHz
Noise Figure	NF	V _{CE} = 5.0V, I _C = 200μA, R _S = 1.0kΩ, f = 1.0kHz			8.0	dB

MAXIMUM RATINGS PNP 5401 (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector- Base Voltage	-160	V
V _{CE0}	Collector-Emitter Voltage	-150	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-0.2	A
P _C	Collector Power Dissipation	0.2	W
R _{θJA}	Thermal Resistance, Junction to Ambient	625	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS PNP 5401 (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100μA, I _E =0	-160			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-150			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-10μA, I _C =0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} =-120V, I _E =0			-50	nA
Emitter cut-off current	I _{EBO}	V _{EB} =-3V, I _C =0			-50	nA
DC current gain	h _{FE1}	V _{CE} =-5V, I _C =-1mA	50			
	h _{FE2}	V _{CE} =-5V, I _C =-10mA	100		300	
	h _{FE3}	V _{CE} =-5V, I _C =-50mA	50			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-10mA, I _B =-1mA			-0.2	V
		I _C =-50mA, I _B =-5mA			-0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-10mA, I _B =-1mA			-1	V
		I _C =-50mA, I _B =-5mA			-1	V
Output Capacitance	C _{obo}	V _{CB} = -10V, f = 1.0MHz, I _E = 0			6.0	pF
Current Gain-Bandwidth Product	f _T	V _{CE} = -10V, I _C = -10mA, f = 100MHz	100		300	MHz
Noise Figure	NF	V _{CE} =-5.0V, I _C = -200μA, R _S = 10 Ω, f = 1.0kHz			8.0	dB