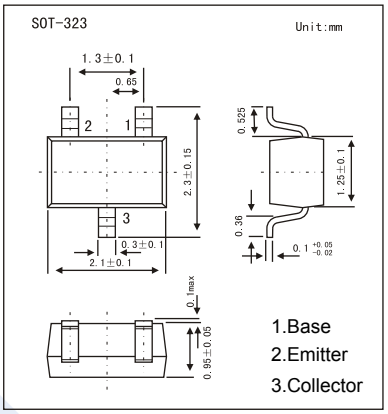
PNP Transistors

2SA1611



■ Features

- High DC Current Gain
- High Voltage
- Complementary to 2SC4177

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-60	V
Collector - Emitter Voltage	V_{CEO}	-50	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-100	mA
Collector Power Dissipation	P_C	150	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	833	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= -100 μA, I_E=0	-60			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA, I_B=0	-50			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A, I_C=0	-5			
Collector-base cut-off current	I_{CBO}	V_{CB}= -60 V , I_E=0			-0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= -5V , I_C=0			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-100 mA, I_B=-10 mA			-0.3	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-100 mA, I_B=-10 mA			-1.2	
Base - emitter voltage	V_{BE}	V_{CE}= -6V, I_C= -1mA	-0.58		-0.68	
DC current gain (Note.1)	h_{FE}	V_{CE}= -6V, I_C= -1mA	90		600	
Collector output capacitance	C_{ob}	V_{CB}= -10V,I_E=0, f=1MHz		4.5		pF
Transition frequency	f_T	V_{CE}= -6V, I_C= -10mA		180		MHz

Note.1: Pulse test: pulse width ≤350μs, duty cycle≤ 2.0%.

■ Classification of h_{fe}

Type	2SA1611-M4	2SA1611-M5	2SA1611-M6	2SA1611-M7
Range	90-180	135-270	200-400	300-600
Marking	M4	M5	M6	M7

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■ Typical Characterisitics