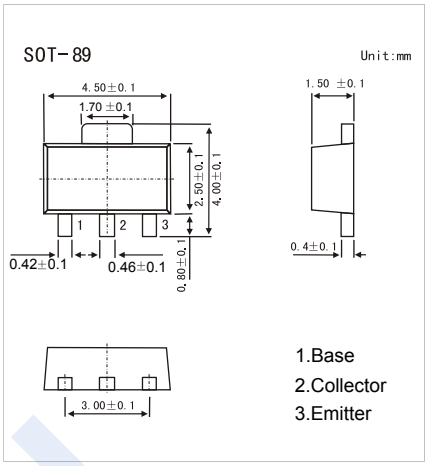
PNP Transistors

2SA1944



■ Features

- High voltage
- Low collector-to-emitter saturation voltage.
- High h_{FE} h_{FE}=400 to 800
- Small package for mounting
- Complements to 2SC5209

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-50	V
Collector - Emitter Voltage	V_{CEO}	-50	
Emitter - Base Voltage	V_{EBO}	-6	
Collector Current - Continuous	I_C	-1	A
Colletor Current - Pulse	I_{CM}	-2	
Collector Power Dissipation	P_C	0.5	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	-50			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA, R_{BE}= ∞	-50			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A, I_C=0	-6			
Collector-base cut-off current	I_{CBO}	V_{CB}= -40 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=-500mA, I_B=-10mA		-0.2	-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-500mA, I_B=-10mA			-1.2	
DC current gain	h_{FE}	V_{CE}= -6V, I_C= -100mA	400		800	
Collector output capacitance	C_{ob}	V_{CB}= -10V, I_E= 0,f=1MHz		30		pF
Transition frequency	f_T	V_{CE}= -10V, I_E= 10mA		90		MHz

■ Classification of h_{fe}

Range	400-800
Marking	XG

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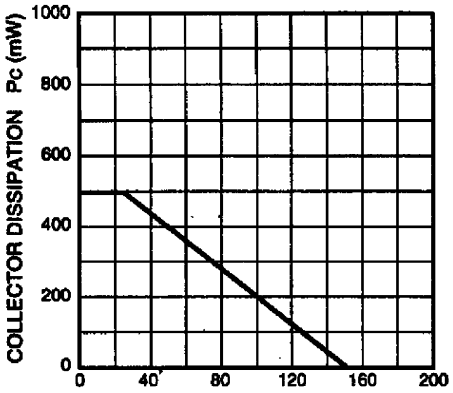
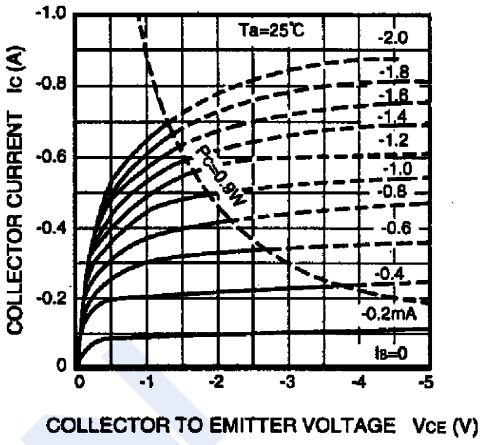
■ Typical Characterisitics

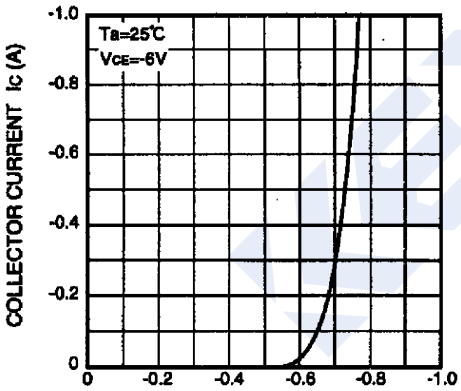
COLLECTOR DISSIPATION VS.AMBIENT TEMPERATURE



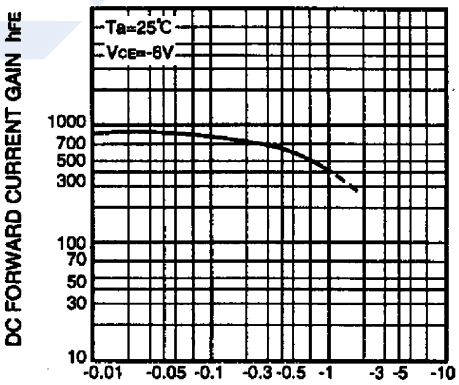
COMMON EMITTER OUTPUT



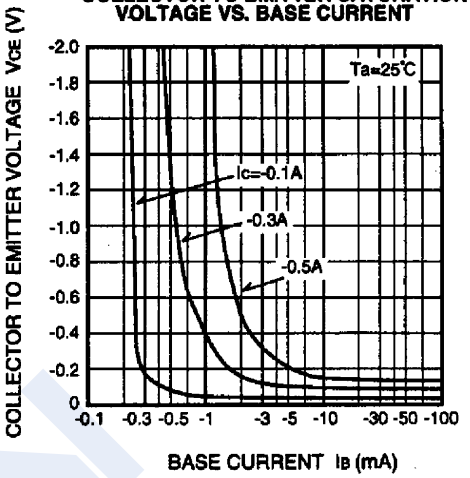
COMMON EMITTER TRANSFER



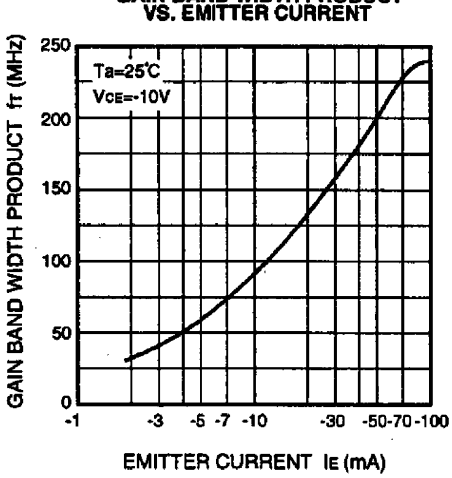
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



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■ Typical Characterisitics