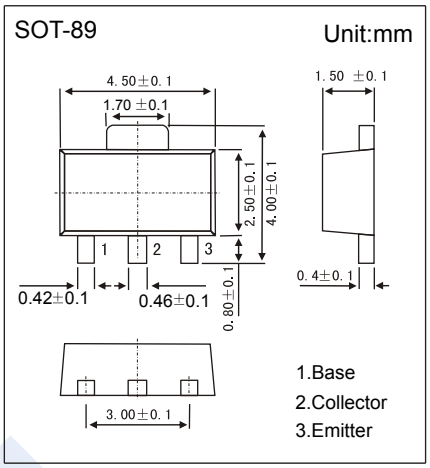
PNP Transistors

2SA1948



■ Features

- Collector Current Capability I_C=-0.1A
- Collector Emitter Voltage V_{CEO}=-120V
- Complementary to 2SC5213

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-120	V
Collector - Emitter Voltage	V_{CEO}	-120	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-100	mA
Collector Power Dissipation	P_C	500	mW
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	-120			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -1 mA, R_{BE}=∞	-120			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A, I_C=0	-5			
Collector-base cut-off current	I_{CBO}	V_{CB}= -100 V , I_E=0			-100	nA
Emitter cut-off current	I_{EBO}	V_{EB}= -4V , I_C=0			-100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-50 mA, I_B=-2.5mA			-0.6	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-50 mA, I_B=-2.5mA			-1.2	
DC current gain	h_{FE}	V_{CE}= -10V, I_C= -10mA	150		800	
Collector output capacitance	C_{ob}	V_{CB}= -20V, I_E= 0,f=1MHz		3.5		pF
Transition frequency	f_T	V_{CE}= -10V, I_E= 10mA		200		MHz

■ Classification of h_{fe}

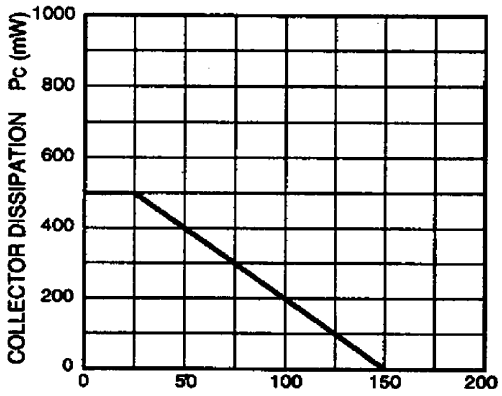
Type	2SA1948-E	2SA1948-F	2SA1948-G
Range	150-300	250-500	400-800
Marking	AC*E	AC*F	AC*G

PNP Transistors

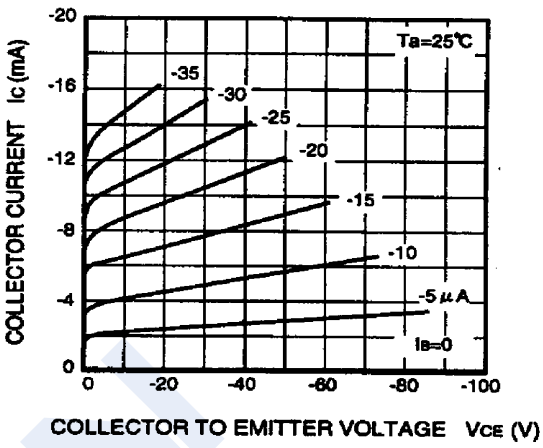
2SA1948

■ Typical Characterisitics

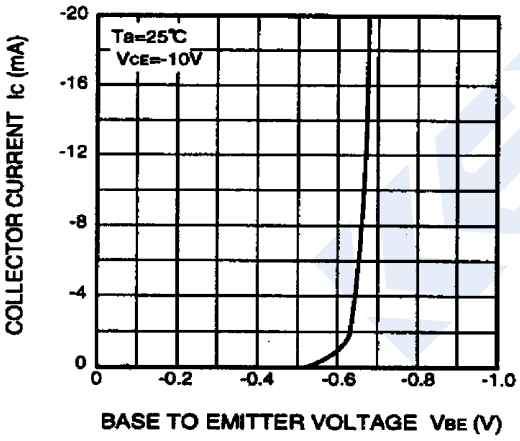
COLLECTOR DISSIPATION VS.AMBIENT TEMPERATURE



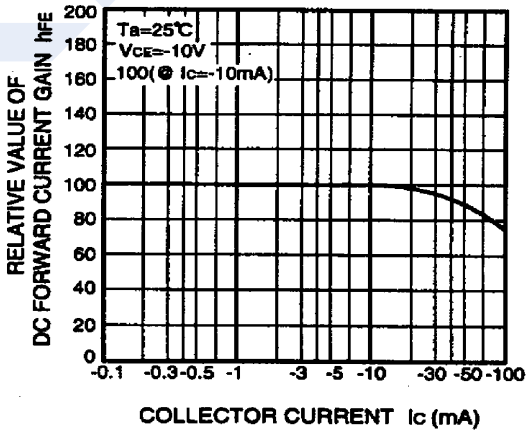
COMMON EMITTER OUTPUT



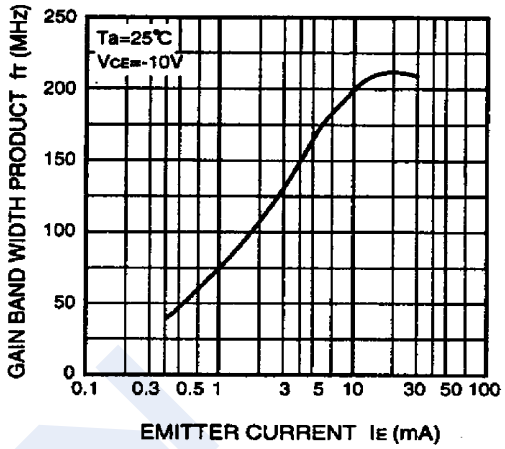
COMMON EMITTER TRANSFER



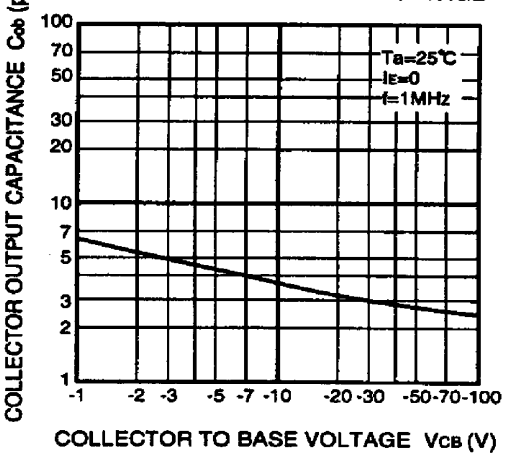
DC FORWARD CURRENT GAIN VS. COLLECTOR CURRENT



GAIN BAND WIDTH PRODUCT VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE VS. COLLECTOR TO BASE VOLTAGE

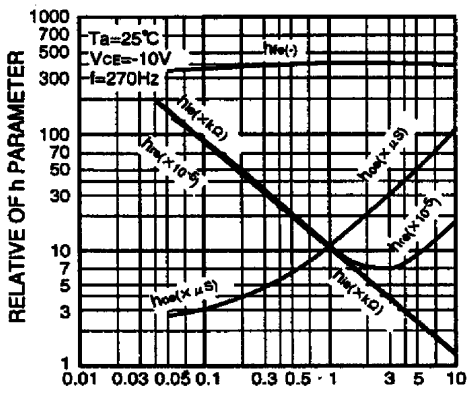


PNP Transistors

2SA1948

■ Typical Characterisitics

h PARAMETER VS. EMITTER CURRENT



h PARAMETER VS. COLLECTOR TO EMITTER VOLTAGE