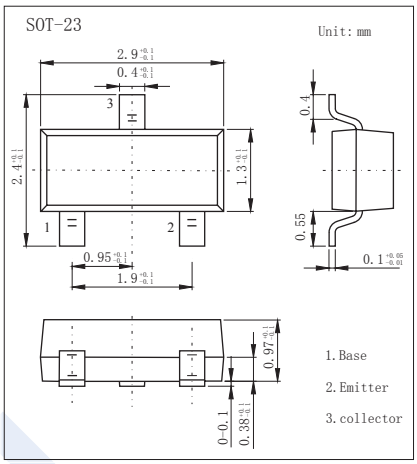
PNP Transistors

2SA1235



■ Features

- Small collector to emitter saturation voltage.
- Excelent lineary DC forward current gain.
- Super mini package for easy mounting.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-6	V
Collector current	I_C	-200	mA
Collector dissipation (Ta=25℃)	P_C	200	mW
Jumction temperature	T_j	125	℃
Storage temperature	T_{stg}	-55 to +125	℃

■ 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, I_B =0	-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}= -50 V , I_E=0			-0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= -6V , I_C=0			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-100 mA, I_B=-10mA			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-100 mA, I_B=-10mA			-1.2	
DC forward current gain	h_{FE}	V_{CE}= -6V, I_C= -1mA	150		800	
		V_{CE}= -6V, I_C= -0.1mA	90			
Noise figure	NF	V_{CB}= -6V, I_E= 0.3mA,f=100 Hz,R_G=10kΩ			20	dB
Collector output capacitance	C_{ob}	V_{CB}= -6V, I_E= 0,f=1MHz		4		pF
Transition frequency	f_T	V_{CE}= -6V, I_E= -10mA		200		MHz

■ Classification of $h_{fe(1)}$

Type	2SA1235-E	2SA1235-F	2SA1235-G
Range	150-300	250-500	400-800
Marking	ME	MF	MG

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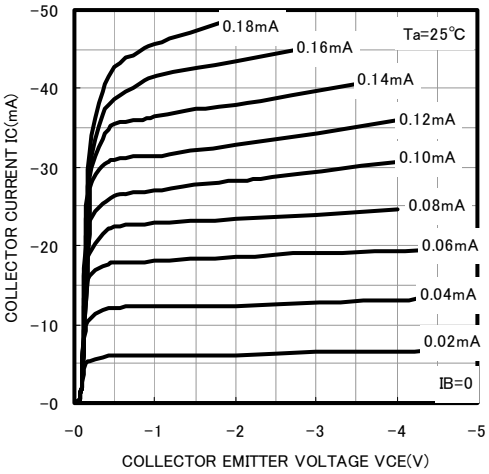
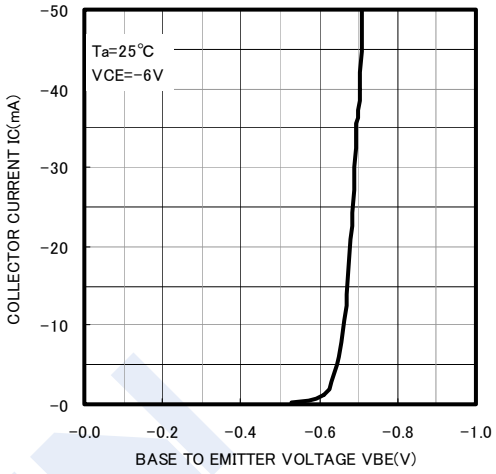
■ Typical Characterisitics

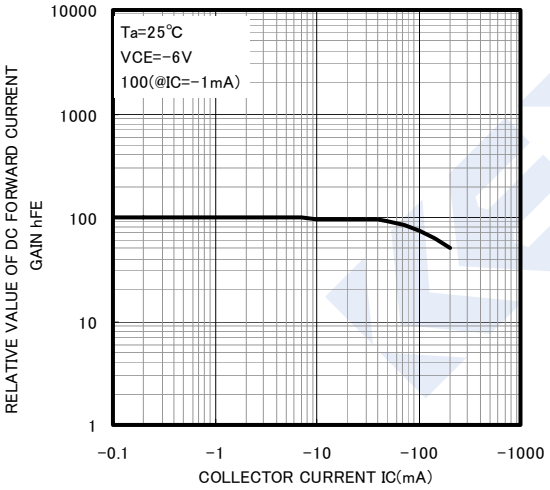
COMMON EMITTER OUTPUT



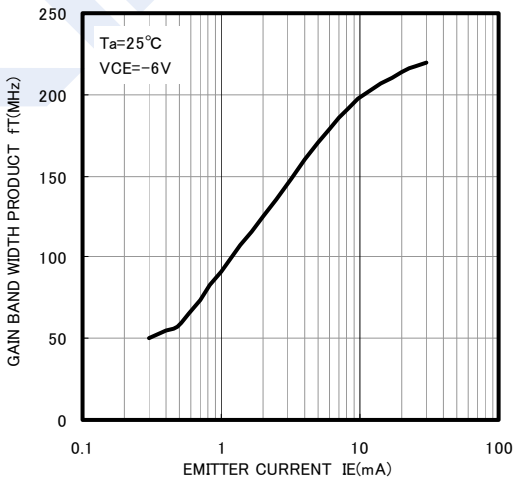
COMMON EMITTER TRANSFER



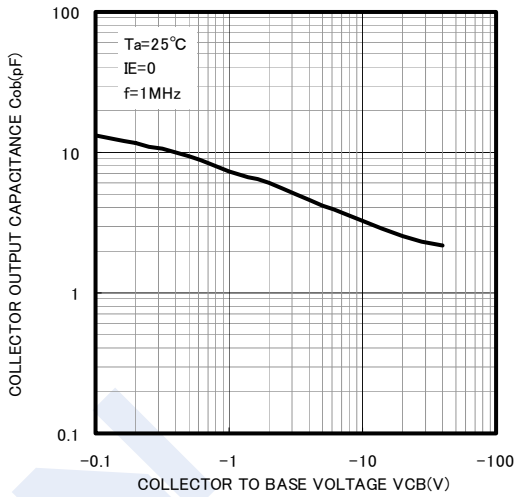
DC FORWARD CURRENT GAIN
VS. COLLECTOR CURRENT



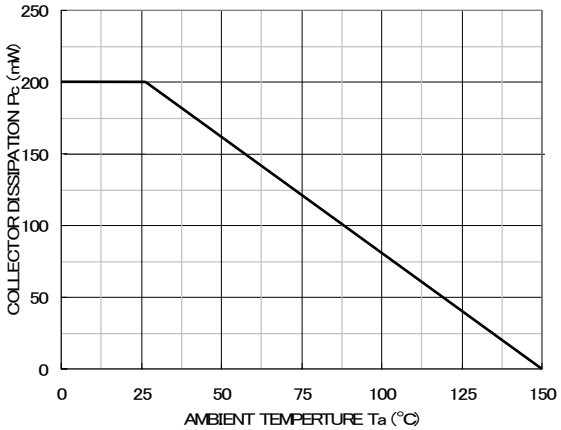
GAIN BAND WIDTH PRODUCT
VS. EMITTER CURRENT



COLLECTOR OUTPUT CAPACITANCE
VS. COLLECTOR TO BASE VOLTAGE



COLLECTOR DISSIPATION VS.AMBIENT TEMPERTURE



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■ Typical Characterisitics