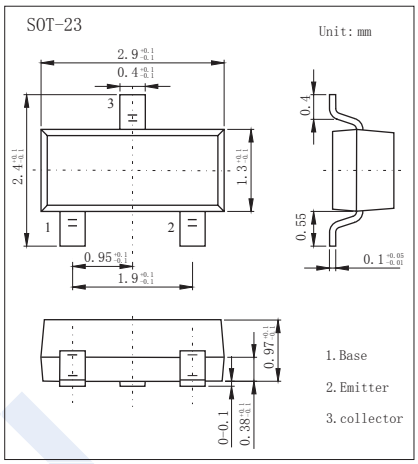
PNP Transistors

2SA1035-HF



■ Features

- Low noise voltage NV.
- High foward current transfer ratio h_{FE}.
- Complementary to 2SC2406-HF.
- Pb−Free Package May be Available. The G−Suffix Denotes a Pb−Free Lead Finish

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-55	V
Collector-emitter voltage	V_{CEO}	-55	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-50	mA
Peak collector current	I_{CP}	-100	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	℃
Storage temperature	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	-55			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -2 mA, I_B=0	-55			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A, I_C=0	-5			
Collector-base cut-off current	I_{CBO}	V_{CB}= -50 V , I_E=0			-100	nA
Collector- emittercut-off current	I_{CEO}	V_{CE}= -40 V , I_B=0			-1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= -5V , I_C=0			-100	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-100 mA, I_B=-10mA			-0.6	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-100 mA, I_B=-10mA			-1.2	
Base - emitter voltage	V_{BE}	V_{BE}=-1V, I_C=-100mA			-1.0	
DC current gain	h_{FE}	V_{CE}= -5V, I_C= -2mA	180		700	
Noise voltage	NV	V_{CE} = –10V, I_C = –1mA, G_V = 80dB R_g = 100kΩ , Function = FLAT			150	mV
Transition frequency	f_T	V_{CB}= -5V, I_E= -2mA,f=200MHz		200		MHz

■ Classification of h_{fe}

Type	2SA1035-R-HF	2SA1035-S-HF	2SA1035-T-HF
Range	180-360	260-520	360-700
Marking	HR $_F$	HS $_F$	HT $_F$

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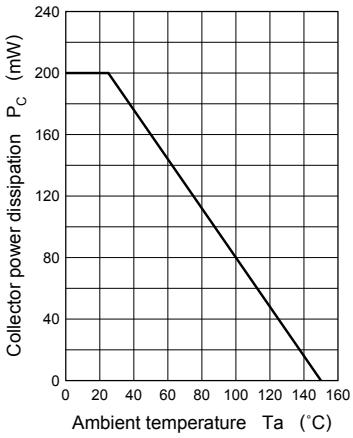
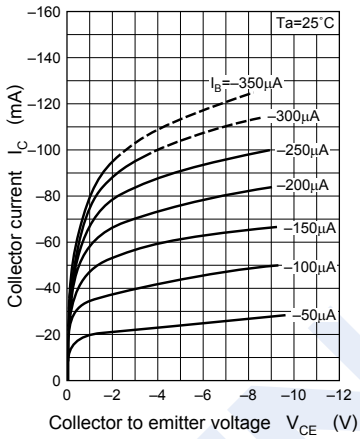
2SA1035-HF

■ Typical Characterisitics

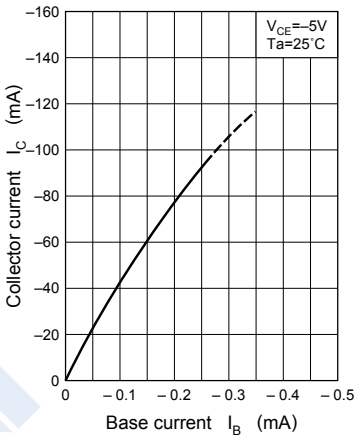
P_C — Ta



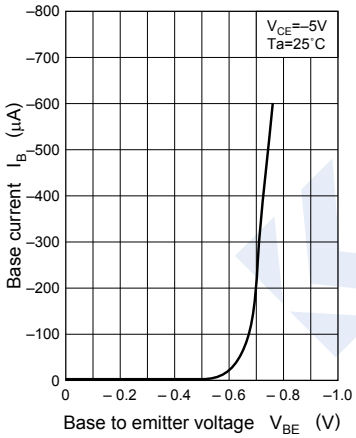
I_C — V_{CE}



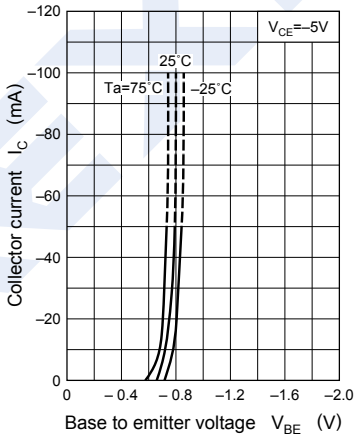
I_C — I_B



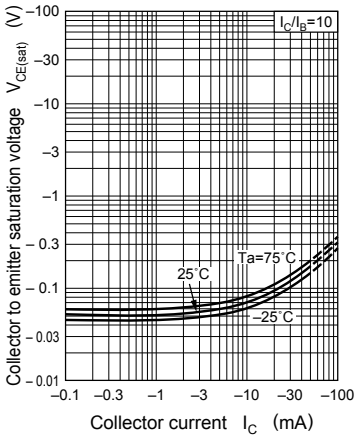
I_B — V_{BE}



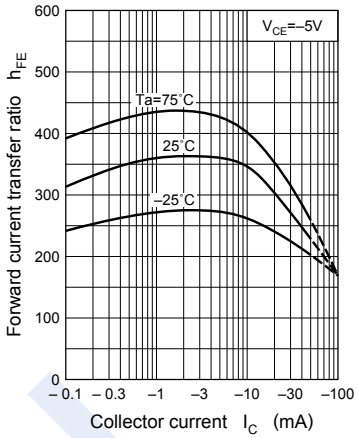
I_C — V_{BE}



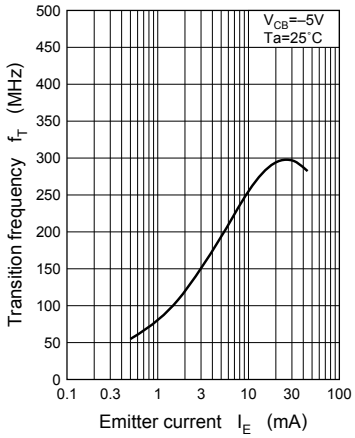
$V_{CE(sat)}$ — I_C



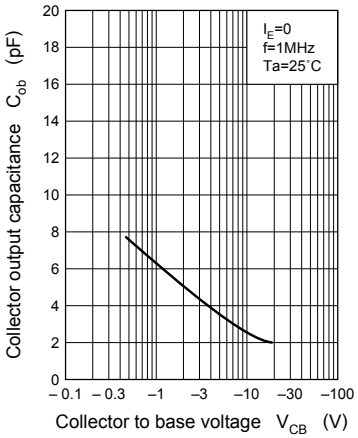
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



PNP Transistors

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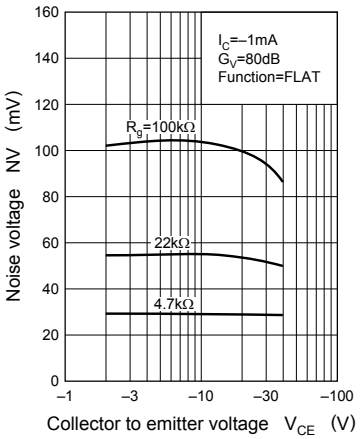
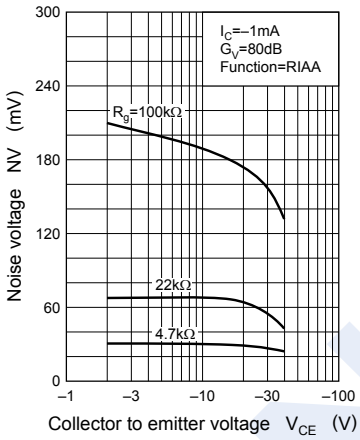
■ Typical Characterisitics

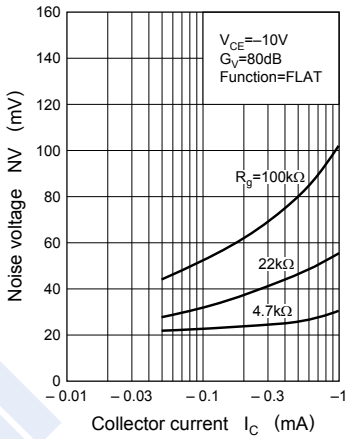
NV — V_{CE}



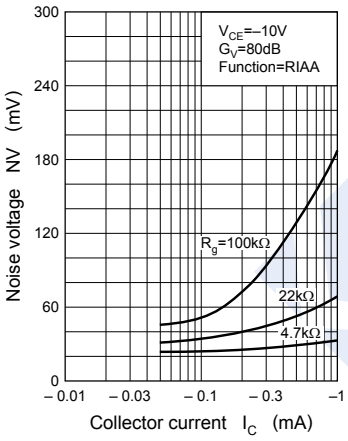
NV — V_{CE}



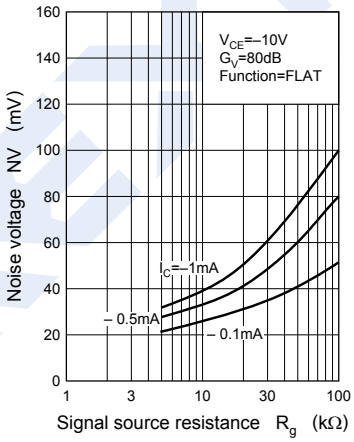
NV — I_C



NV — I_C



NV — R_g



NV — R_g