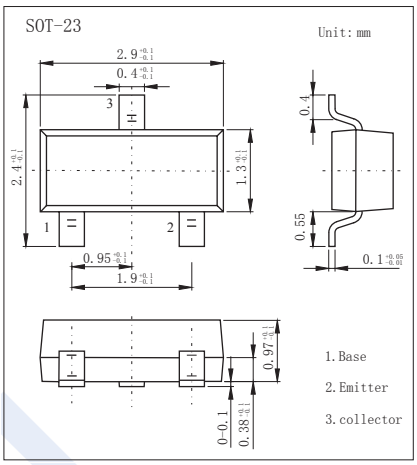
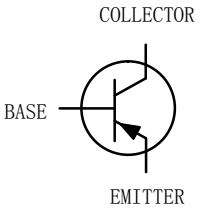
PNP Transistors

NSS1C200LT1G (KSS1C200LT1G)



■ Features

- Collector Current Capability I_C=-2A
- Collector Emitter Voltage V_{CEO}=-100V



■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Collector - Base Voltage		V_{CBO}	-140	V
Collector - Emitter Voltage		V_{CEO}	-100	
Emitter - Base Voltage		V_{EBO}	-7	
Collector Current - Continuous		I_C	-2	A
Collector Current - Pulse		I_{CP}	-3	
Collector Power Dissipation	(Note.1)	P_C	490	mW
	(Note.2)		710	
Derate above 25°C	(Note.1)		3.7	mW/°C
	(Note.2)		4.3	
Thermal Resistance, Junction-to-Ambient	(Note.1)	$R_{\theta JA}$	255	℃/W
	(Note.2)		176	
Junction Temperature		T_J	150	℃
Storage Temperature range		T_{stg}	-55 to 150	

Note.1: FR- 4 @ 100 mm², 1 oz. copper traces.

Note.2: FR- 4 @ 500 mm², 1 oz. copper traces.

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■ 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	-140			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= -10 mA, I_B=0	-100			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μA, I_C=0	-7			
Collector-base cut-off current	I_{CBO}	V_{CB}= -140 V , I_E=0			-100	nA
Emitter cut-off current	I_{EBO}	V_{EB}= -6V , I_C=0			-50	
Collector-emitter saturation voltage (Note.1)	$V_{CE(sat)}$	I_C=-100 mA, I_B=-10mA			-0.04	V
		I_C=-500 mA, I_B=-50mA			-0.08	
		I_C=-1 A, I_B=-100mA			-0.115	
		I_C=-2 A, I_B=-200mA			-0.25	
Base - emitter saturation voltage (Note.1)	$V_{BE(sat)}$	I_C=-1 A, I_B=-100mA			-0.95	
Base - emitter voltage (Note.1)	$V_{BE(on)}$	V_{CE}= -2V, I_C= -1 A			-0.85	
DC current gain (Note.1)	h_{FE}	V_{CE}= -2 V, I_C= -10mA	150			
		V_{CE}=- 2 V, I_C= -500mA	120		360	
		V_{CE}=- 2 V, I_C= -1 A	80			
		V_{CE}=- 2 V, I_C= -2 A	50			
Collector input capacitance	C_{ibo}	V_{EB}= -2V, f=1MHz		200		pF
Collector output capacitance	C_{obo}	V_{CB}= -10V, f=1MHz		22		
Transition frequency	f_T	V_{CE}= -5V, I_C= -100mA,f=100MHz		120		MHz

Note.1: Pulsed Condition: Pulse Width = 300 msec, Duty Cycle ≤ 2%.

■ Marking

Marking	VL *

■ Typical Characterisitics

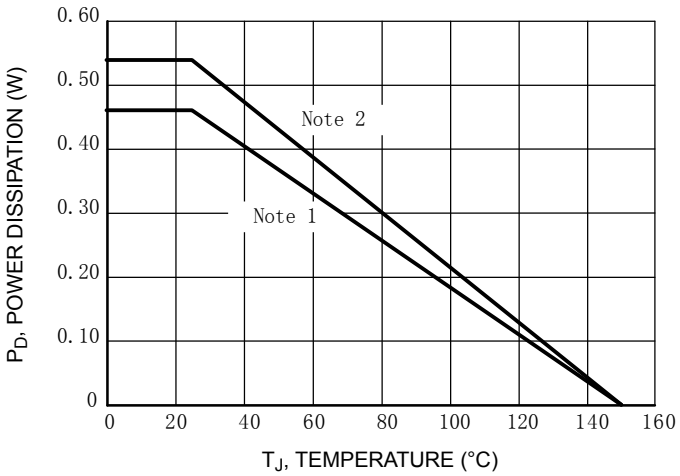

Figure 1. Power Derating

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■ Typical Characterisitics

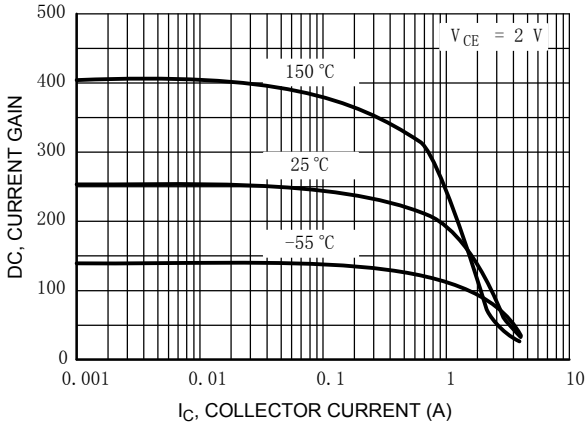

Figure 2. DC Current Gain

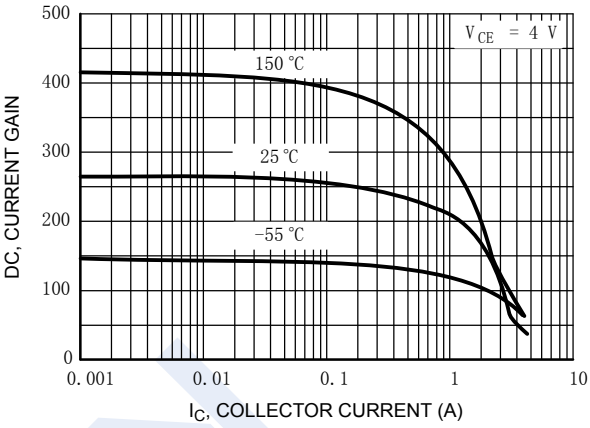

Figure 3. DC Current Gain

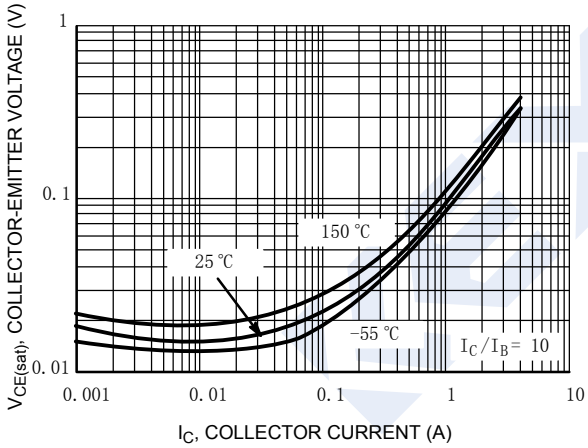

Figure 4. Collector-Emitter Saturation Voltage

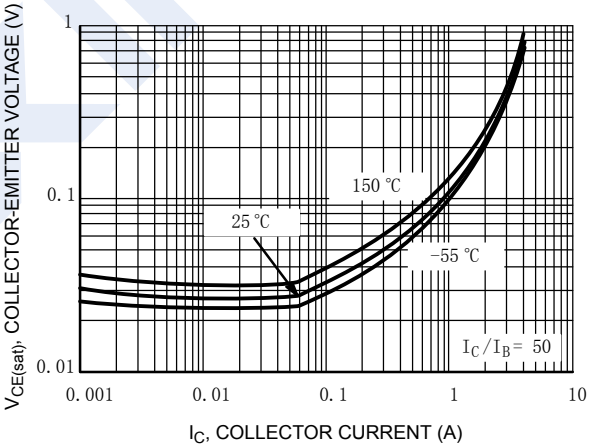

Figure 5. Collector-Emitter Saturation Voltage

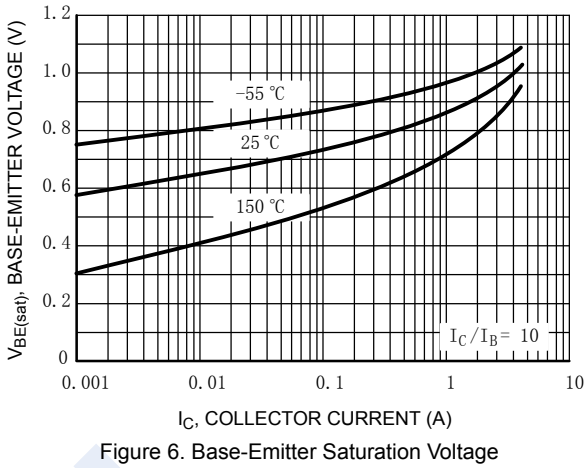

Figure 6. Base-Emitter Saturation Voltage

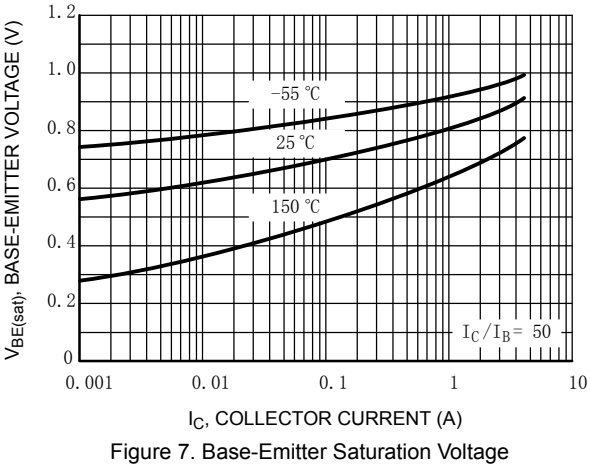

Figure 7. Base-Emitter Saturation Voltage

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■ Typical Characterisitics

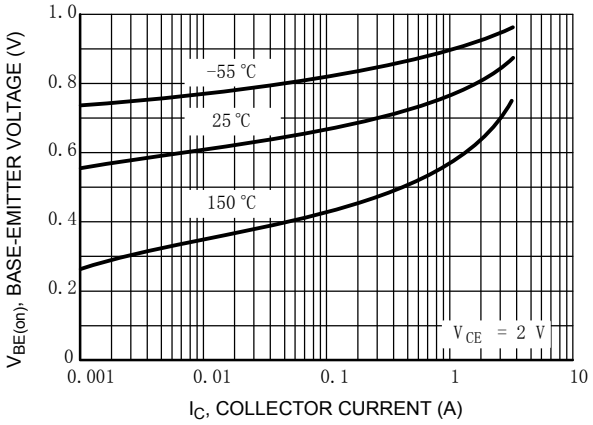

Figure 8. Base-Emitter Saturation Voltage

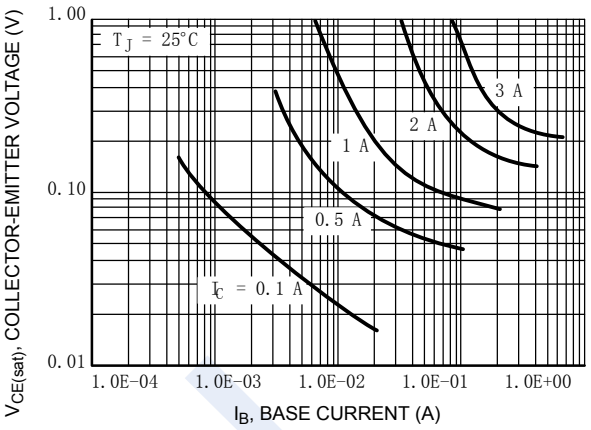

Figure 9. Collector Saturation Region

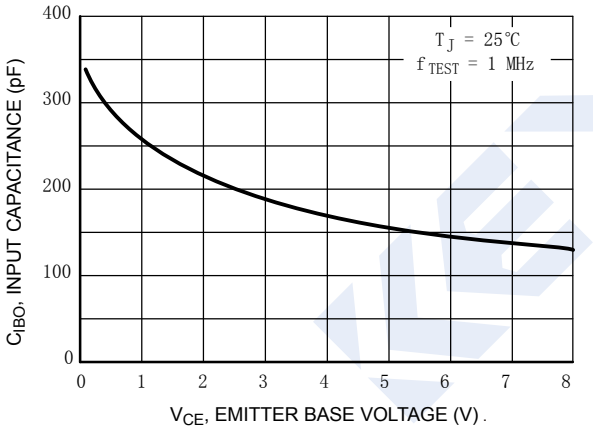

Figure 10. Input Capacitance

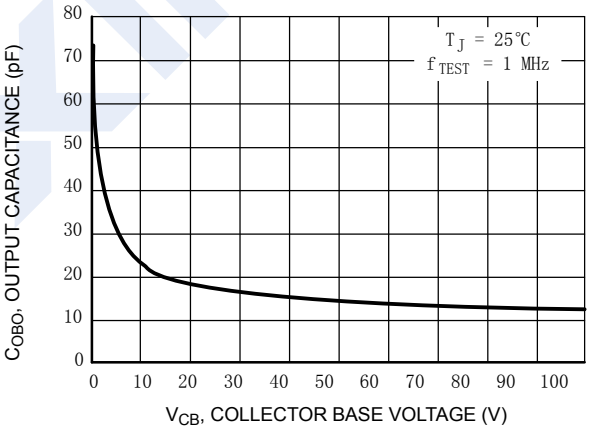

Figure 11. Output Capacitance

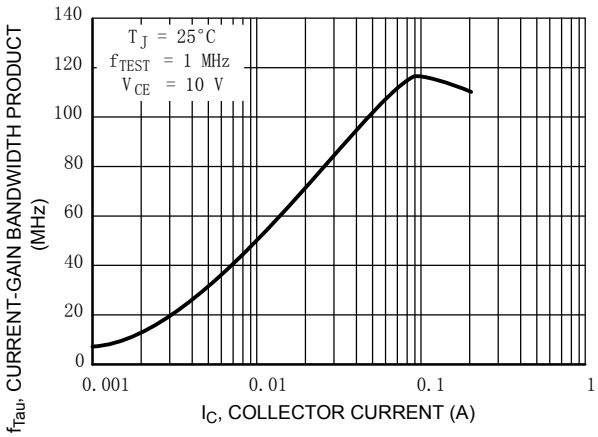

Figure 12. Current-Gain Bandwidth Product

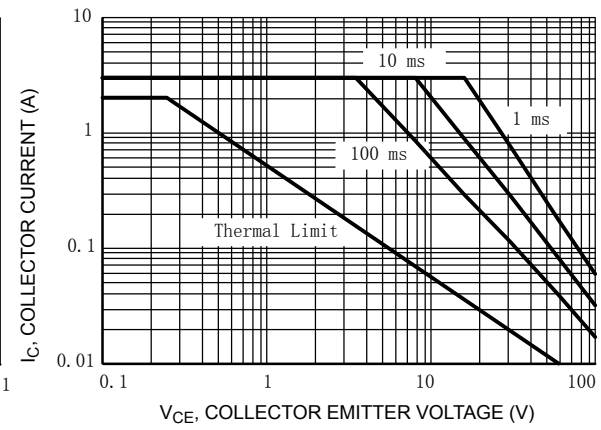

Figure 13.