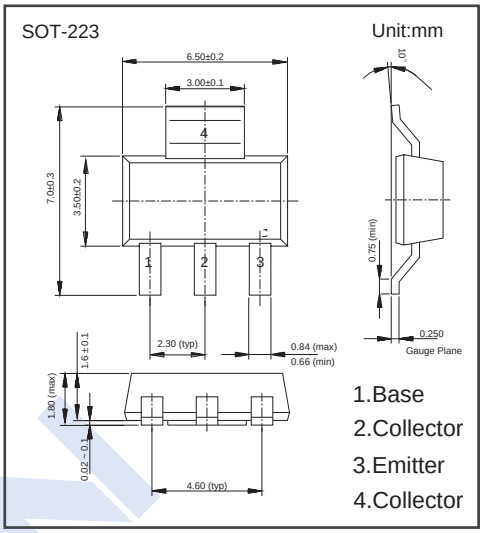
PNP Transistors

2KB4015



■ Features

- Collector Current Capability I_C=-4A
- Collector Emitter Voltage V_{CEO}=-140V
- Very low saturation voltages

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-180	V
Collector - Emitter Voltage	V_{CEO}	-140	
Emitter - Base Voltage	V_{EBO}	-6	
Collector Current - Continuous	I_C	-4	A
Peak Pulse Current	I_{CM}	-10	
Collector Power Dissipation	P_C	3	W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

PNP Transistors

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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	-180			V
Collector- emitter breakdown voltage	V_{CER}	I_C=-1 uA, R_B < 1kΩ	-180			
Collector- emitter breakdown voltage	V_{CEO}	I_C= -10 mA， I_B=0	-140			
Emitter - base breakdown voltage	V_{EBO}	I_E= -100 μ A， I_C=0	-6			
Collector-base cut-off current	I_{CBO}	V_{CB}= -150 V , I_E=0			-50	nA
		V_{CB}= -150 V , I_E=0 , Ta = 100℃			-1	uA
Collector cut-off current R < 1kΩ	I_{CER}	V_{CE}= -140 V , I_E=0			-50	nA
		V_{CE}= -140 V , I_E=0 , Ta = 100℃			-1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= -6V , I_C=0			-100	nA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-100 mA, I_B=-5 mA			-60	mV
		I_C=-500 mA, I_B=-50mA			-120	
		I_C=-1 A, I_B=-100mA			-150	
		I_C=-3 A, I_B=-300mA			-370	
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=-3 A, I_B=-300mA			-1110	
Base - emitter turn-on voltage	$V_{BE(on)}$	V_{CE}= -5V, I_C= -3A			-950	
DC current gain	h_{FE}	V_{CE}= -5V, I_C= -10mA	100			
		V_{CE}=- 5V, I_C= -1 A	100		300	
		V_{CE}= -5V, I_C= -3 A	75			
		V_{CE}= -5V, I_C= -10 A		10		
Switching Times	t_{on}	I_C=-1A, I_{B1}=-100mA I_{B2}=100mA, V_{CC}=-50V		68		ns
	t_{off}			1030		
Collector output capacitance	C_{ob}	V_{CB}= -20V,f=1MHz		40		pF
Transition frequency	f_T	V_{CE}= -10V, I_C= -100mA,f=50MHz		110		MHz

Note : Measured under pulsed conditions. Pulse width=300 us. Duty cycle ≤2%

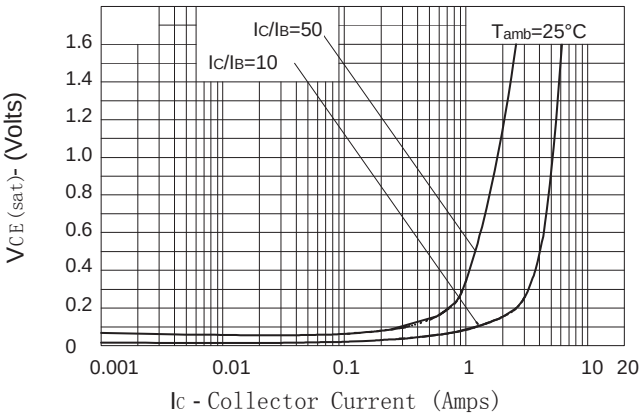
■ Marking

Marking	2KC

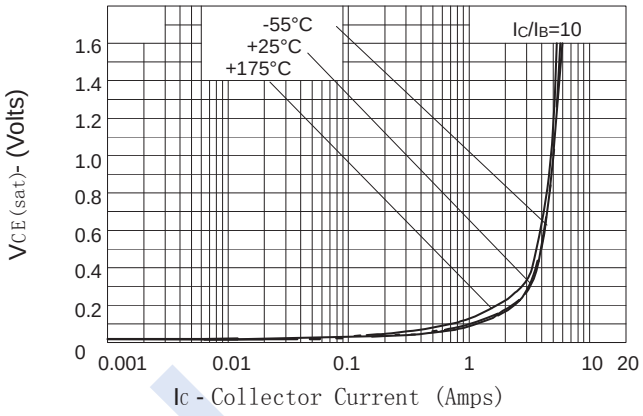
PNP Transistors

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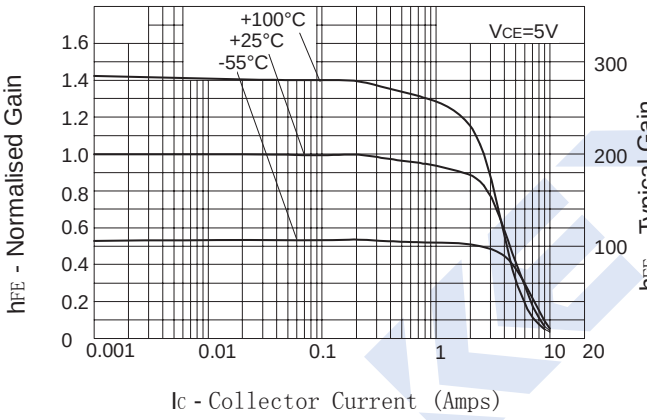
■ Typical Characterisitics



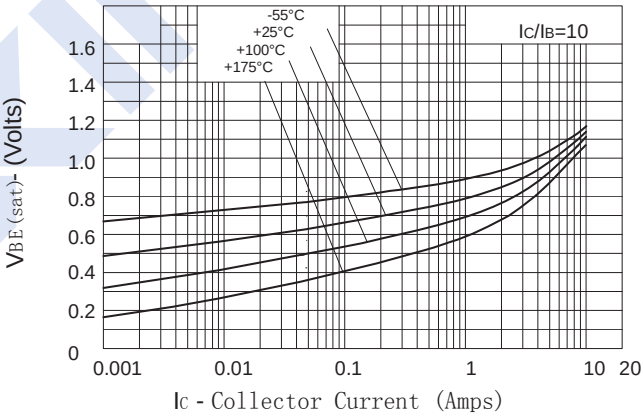
VCE(sat) v IC



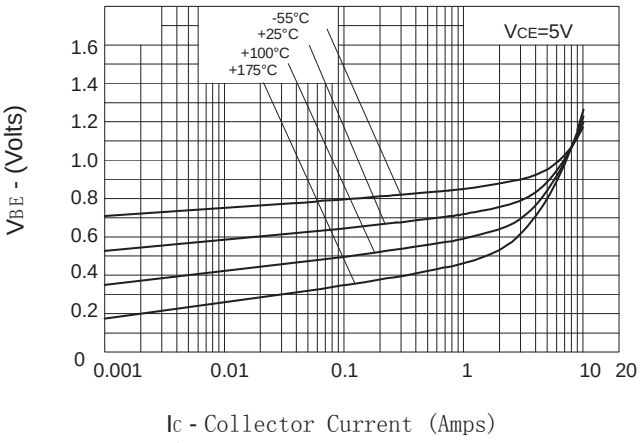
VCE(sat) v IC



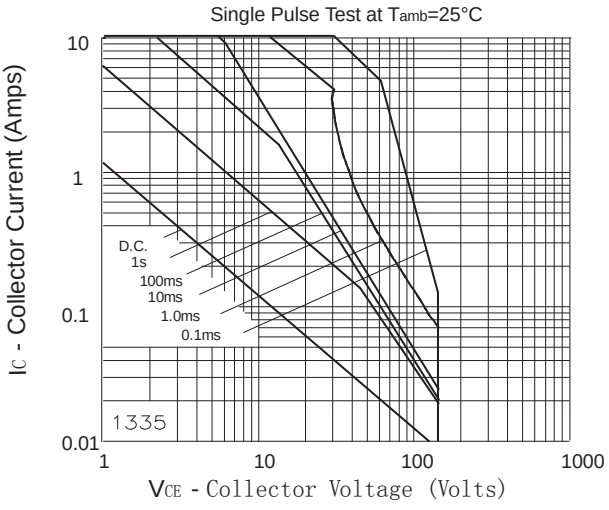
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area