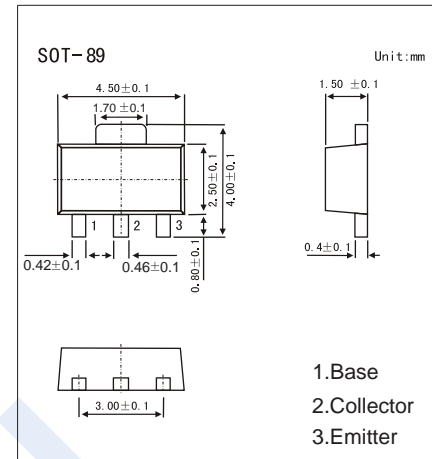


PNP Transistors

2KB4009

■ Features

- Collector Current Capability $I_C = -4A$
- Collector Emitter Voltage $V_{CE0} = -140V$
- Very low saturation voltages



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-180	V
Collector - Emitter Voltage	V_{CE0}	-140	
Emitter - Base Voltage	V_{EB0}	-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	$^\circ C$
Storage Temperature range	T_{stg}	-55 to 150	

PNP Transistors

2KB4009

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	VCBO	IC= -100 μ A, IE=0	-180			V
Collector- emitter breakdown voltage	VCER	IC=-1 μ A, RB < 1k Ω	-180			
Collector- emitter breakdown voltage	VCEO	IC= -10 mA, IB=0	-140			
Emitter - base breakdown voltage	VEBO	IE= -100 μ A, IC=0	-6			
Collector-base cut-off current	ICBO	VCB= -150 V, IE=0			-50	nA
		VCB= -150 V, IE=0, Ta = 100°C			-1	μ A
Collector cut-off current R < 1k Ω	ICER	VCB= -150 V, IE=0			-50	nA
		VCB= -150 V, IE=0, Ta = 100°C			-1	μ A
Emitter cut-off current	IEBO	VEB= -6V, IC=0			-100	nA
Collector-emitter saturation voltage	VCE(sat)	IC=-100 mA, IB=-5 mA			-60	mV
		IC=-500 mA, IB=-50mA			-120	
		IC=-1 A, IB=-100mA			-150	
		IC=-3 A, IB=-300mA			-370	
Base - emitter saturation voltage	VBE(sat)	IC=-3 A, IB=-300mA			-1110	
Base - emitter turn-on voltage	VBE(on)	VCE= -5V, IC= -3A			-950	
DC current gain	hFE	VCE= -5V, IC= -10mA	100			
		VCE= -5V, IC= -1 A	100		300	
		VCE= -5V, IC= -3 A	75			
		VCE= -5V, IC= -10 A		10		
Switching Times	ton	IC=-1A, IB1=-100mA		68		ns
	toff	IB2=100mA, VCC=-50V		1030		
Collector output capacitance	Cob	VCB= -20V, f=1MHz		40		pF
Transition frequency	fr	VCE= -10V, IC= -100mA, f=50MHz		110		MHz

Note : Measured under pulsed conditions. Pulse width=300 μ s. Duty cycle \leq 2%

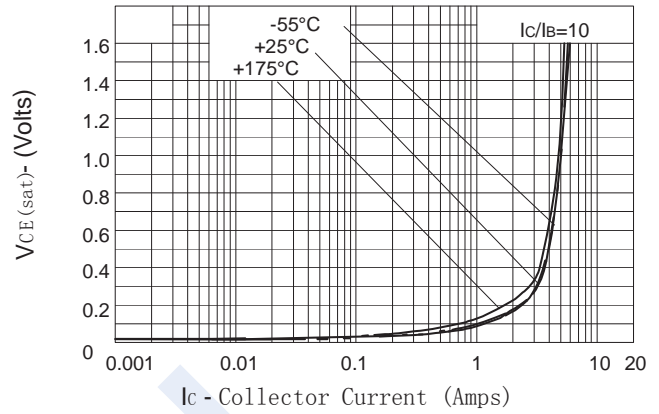
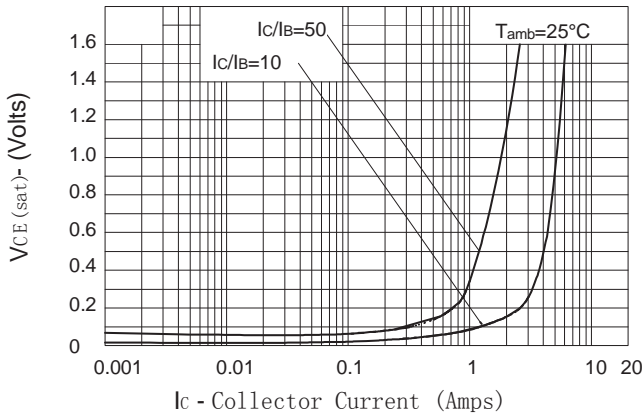
■ Marking

Marking	2K5*
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PNP Transistors

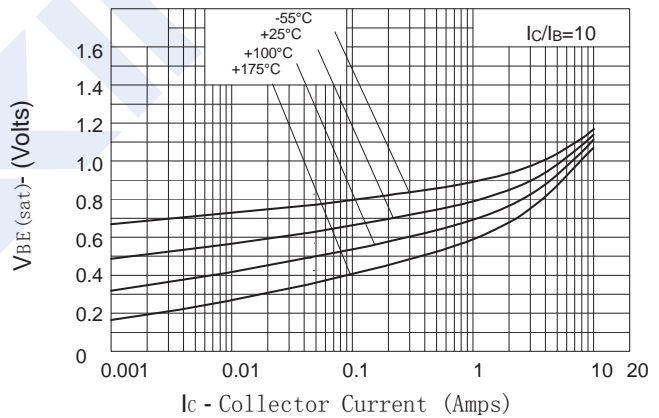
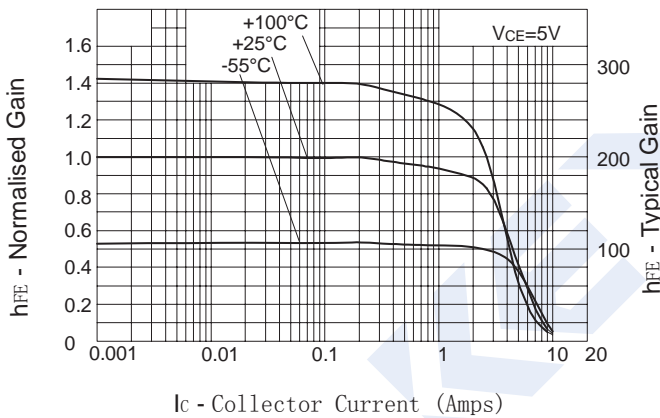
2KB4009

Typical Characteristics



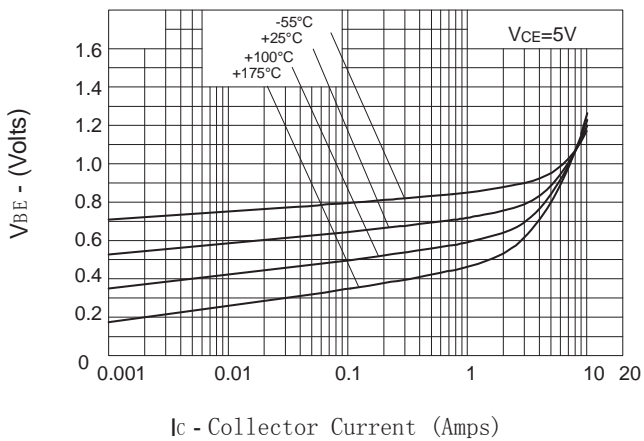
VCE(sat) v IC

VCE(sat) v IC

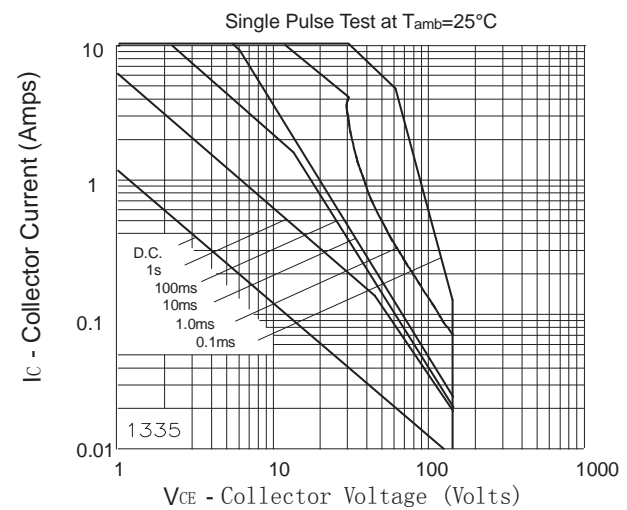


hFE v IC

VBE(sat) v IC



VBE(on) v IC



Safe Operating Area