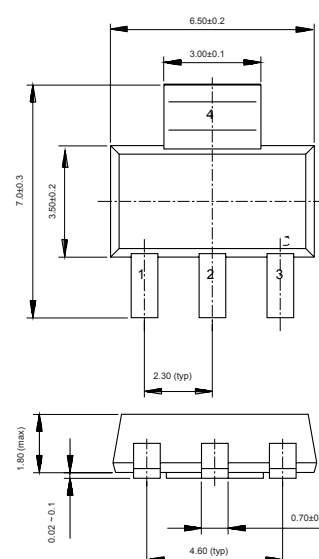


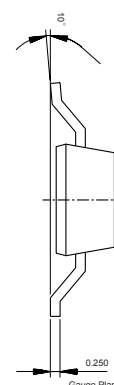
■ Features

- Low equivalent on-resistance; $R_{CE(sat)}$ 93m Ω at 3A.
- Gain of 300 at $I_C=2$ Amps and Very low saturation voltage.

SOT-223



Unit:mm



- 1.Base
- 2.Collector
- 3.Emitter
- 4.Collector

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

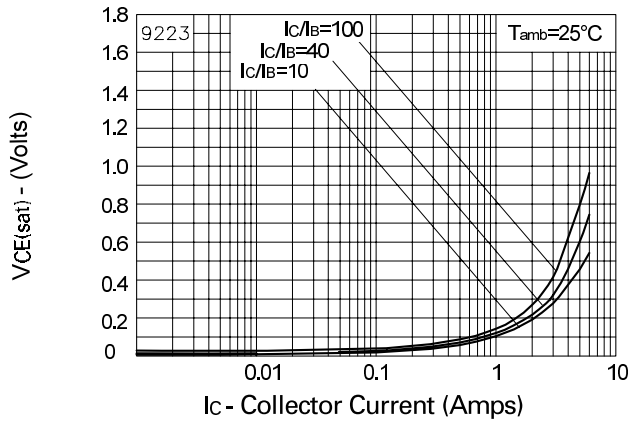
Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-25	V
Collector - Emitter Voltage	V_{CEO}	-25	
Emitter - Base Voltage	V_{EBO}	-5	
Collector Current - Continuous	I_C	-3	A
Peak Pulse Current	I_{CM}	-6	
Collector Power Dissipation	P_C	2	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25°C

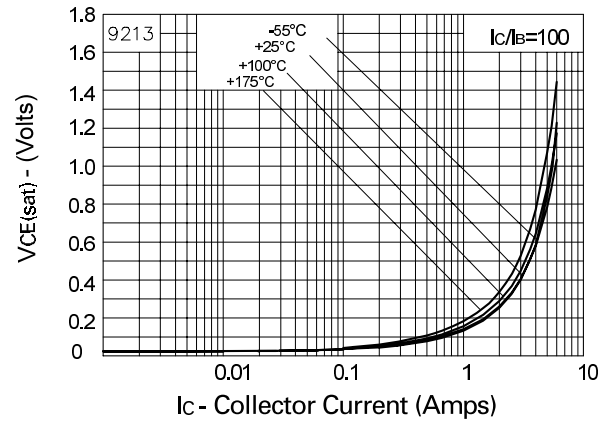
Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Breakdown Voltages	$V_{(BR)CBO}$	$I_C = -100\mu A$	-25	-40		V
Breakdown Voltages *	$V_{(BR)CEO}$	$I_C = -10mA$	-25	-35		V
Breakdown Voltages	$V_{(BR)EBO}$	$I_E = -100\mu A$	-5	-8.5		V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -15V$ $V_{CB} = -15V, T_a = 100^\circ C$			-0.1 10	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -4V$			-0.1	μA
Saturation Voltages *	$V_{CE(sat)}$	$I_C = -1A, I_B = -10mA$ $I_C = -2A, I_B = -20mA$ $I_C = -3A, I_B = -100mA$		-0.15 -0.30 -0.30	-0.25 -0.45 -0.50	V
Saturation Voltages *	$V_{BE(sat)}$	$I_C = -1A, I_B = -10mA$		-0.8	-1.0	V
Base-Emitter Turn-On Voltage *	$V_{BE(on)}$	$I_C = -1A, V_{CE} = -2V$		-0.8		V
Static Forward Current Transfer Ratio	h_{FE}	$I_C = -10mA, V_{CE} = -2V$	300		800	
		$I_C = -1A, V_{CE} = -2V^*$	250			
		$I_C = -2A, V_{CE} = -2V^*$	200			
		$I_C = -6A, V_{CE} = -2V^*$	100			
Transitional frequency	f_T	$I_C = -50mA, V_{CE} = -5V, f = 50MHz$	100			MHz
Input capacitance	C_{ibo}	$V_{EB} = -0.5V, f = 1MHz$		225		pF
Output capacitance	C_{obo}	$V_{CB} = -10V, f = 1MHz$		25		pF
Turn-on time	$t_{(on)}$	$I_C = -500mA, V_{CC} = -10V$		35		ns
Turn-off time	$t_{(off)}$	$I_{B1} = I_{B2} = -50mA$		400		ns

* Pulse test: $t_p = 300 \mu s$; $d \leq 0.02$.

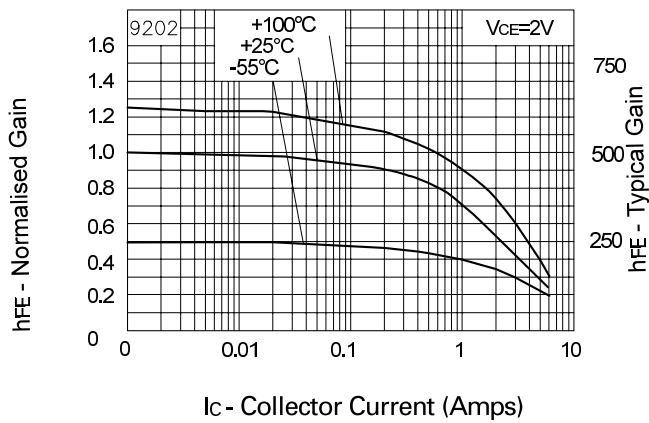
■ Typical Characteristics



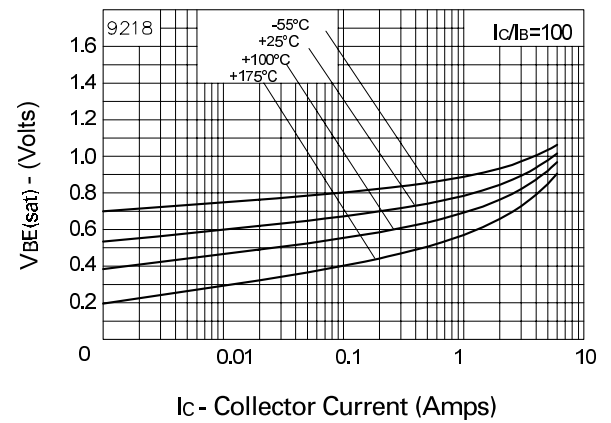
$V_{CE(sat)}$ v I_C



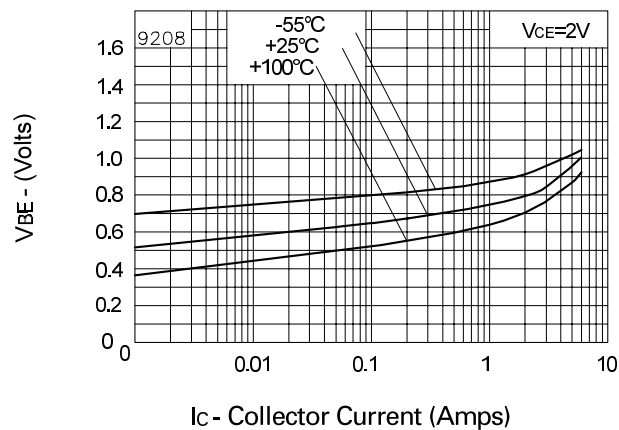
$V_{CE(sat)}$ v I_C



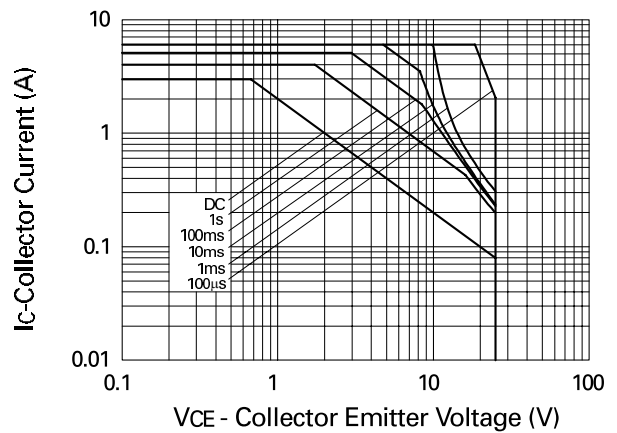
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area