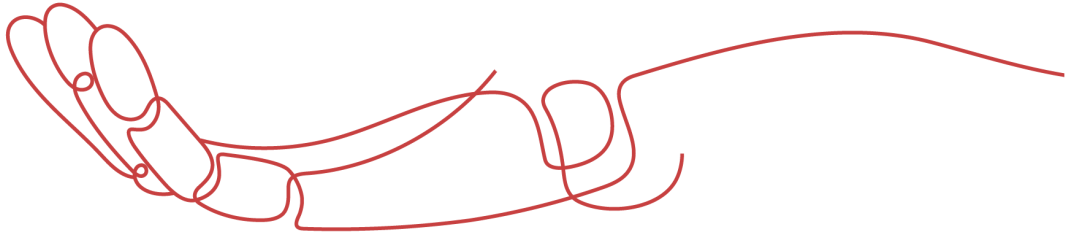




PRODUCT DATA SHEET



To learn more about JGSEMI, please visit our website at



Datasheet



Resources

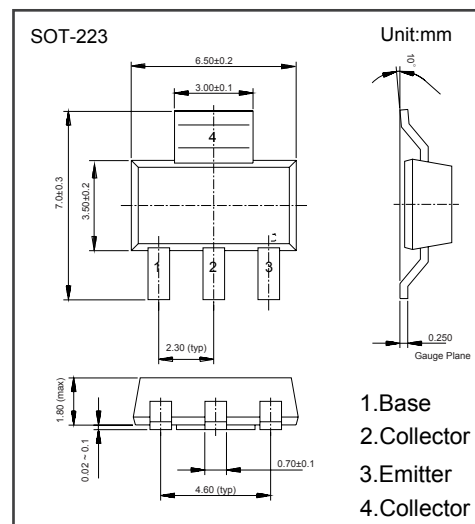


Samples

Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

■ Features

- Collector Current Capability $I_C = -5A$
- Collector Emitter Voltage $V_{CE0} = -60V$



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

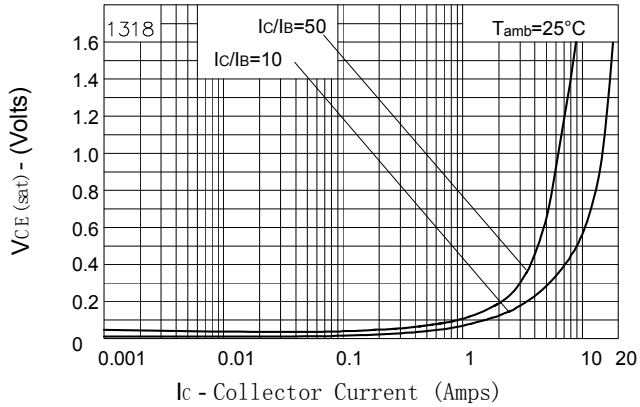
Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	-100	V
Collector - Emitter Voltage	V_{CEO}	-60	
Emitter - Base Voltage	V_{EBO}	-6	
Collector Current - Continuous	I_C	-5	A
Collector Current - Pulse	I_{CP}	-15	
Collector Power Dissipation	P_C	3	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

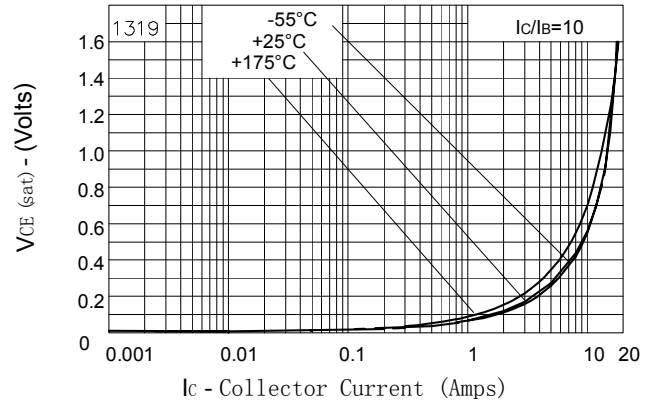
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = -100 μA, I _E =0	-100			V
Collector- emitter breakdown voltage	V _{CER}	I _c = -1uA, R _B ≤1K Ω	-100			
	V _{CEO}	I _c = -10 mA, I _B =0	-60			
Emitter - base breakdown voltage	V _{EBO}	I _E = -100 μA, I _c =0	-6			
Collector-base cut-off current	I _{CBO}	V _{CB} = -80 V, I _E =0			-50	nA
		V _{CB} = -80 V, I _E =0, Ta = 100℃			-1	uA
Collector-emitter cut-off current (R≤1KΩ)	I _{CER}	V _{CB} = -80 V, I _E =0			-50	nA
		V _{CB} = -80 V, I _E =0, Ta = 100℃			-1	uA
Emitter cut-off current	I _{EBO}	V _{EB} = -6V, I _c =0			-10	nA
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =-100mA, I _B =-10mA (Note.1)			-50	mV
		I _c =-1 A, I _B =-100mA (Note.1)			-140	
		I _c =-2 A, I _B = -200mA (Note.1)			-210	
		I _c =-5 A, I _B =-500mA (Note.1)			-460	
Base - emitter saturation voltage	V _{BE(sat)}	I _c =-5 A, I _B =-500mA (Note.1)			-1.24	V
Base-Emitter Turn-On Voltage	V _{BE(on)}	V _{CE} = -1V, I _c = -5A (Note.1)			-1.07	
DC current gain (Note.1)	h _{FE(1)}	V _{CE} = -1V, I _c = -10mA	100			
	h _{FE(2)}	V _{CE} = -1V, I _c = -2 A	100		300	
	h _{FE(3)}	V _{CE} = -1V, I _c = -5 A	75			
	h _{FE(4)}	V _{CE} = -1V, I _c = -10 A	10			
Switching Times	t _{on}	I _c =-2A, I _{B1} =-200mA		82		ns
	t _{off}	I _{B2} =200mA, V _{CC} =-10V		350		
Collector output capacitance	C _{ob}	V _{CB} = -10V, f=1MHz (Note.1)		74		pF
Transition frequency	f _T	V _{CE} = -10V, I _c = -100mA, f=50MHz		120		MHz

Note.1: Pulse width=300 us. Duty cycle ≤ 2%

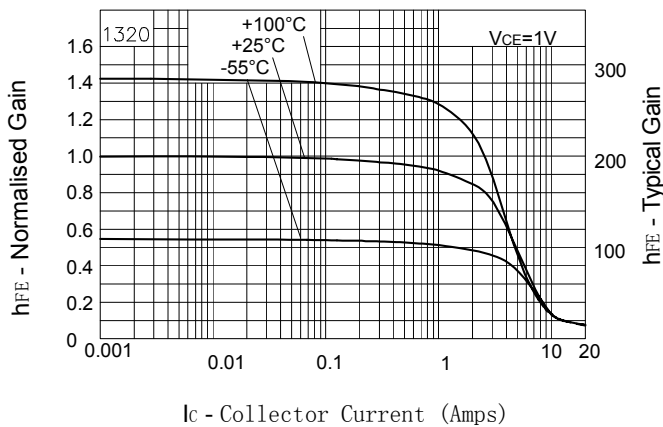
■ Typical Characteristics



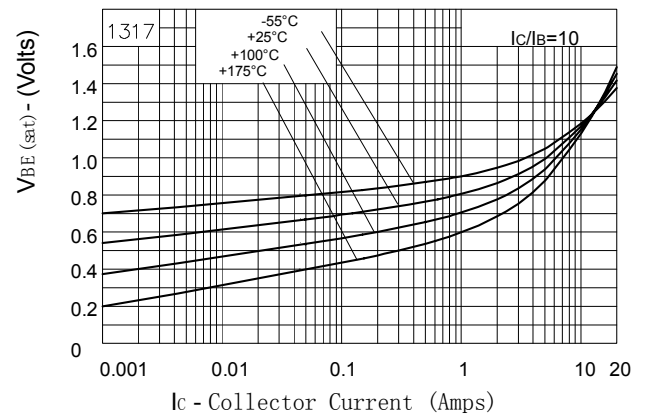
$V_{CE(sat)}$ v I_C



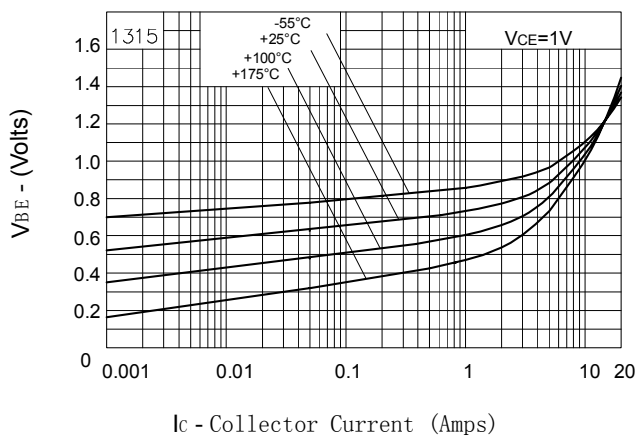
$V_{CE(sat)}$ v I_C



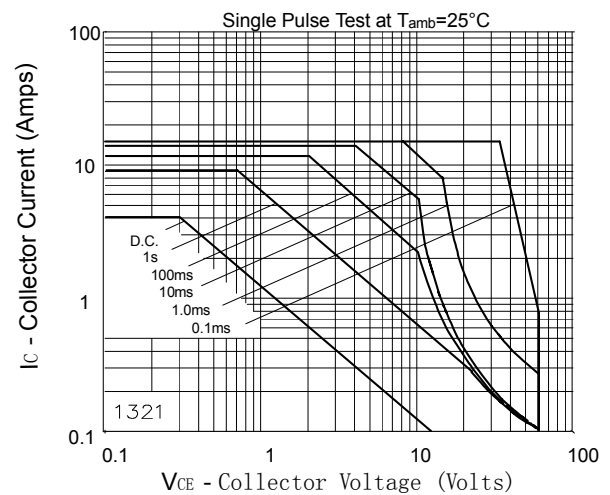
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area

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