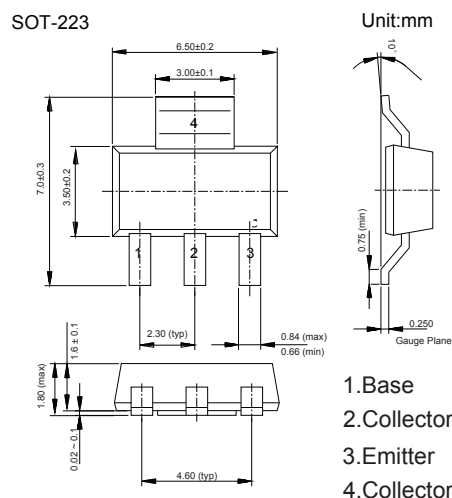


■ Features

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



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

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
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	42	$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to 150	$^\circ C$

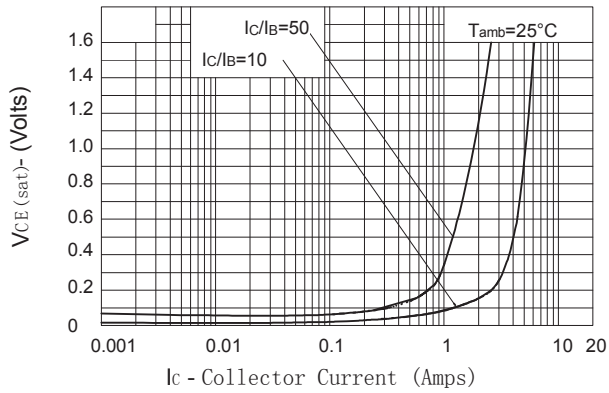
Note 1: For a device mounted with the collector lead on 52mm x 52mm 2oz copper that is on a single-sided 1.6mm FR4 PCB; device is measured under still air conditions whilst operating in steady-state.

■ Electrical Characteristics Ta = 25°C

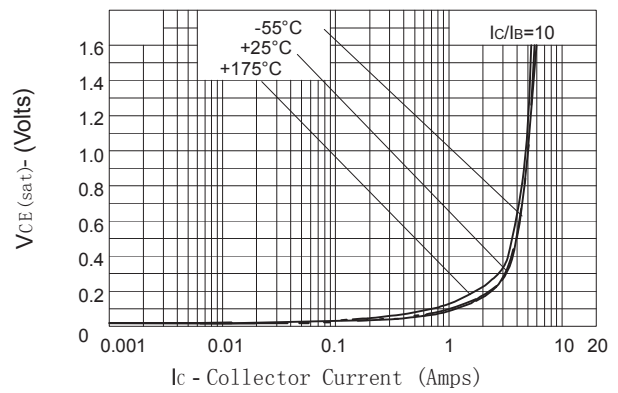
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = -100 μ A, I _E =0	-180			V
Collector- emitter breakdown voltage	V _{CER}	I _c =-1 μ A, R _B $\leq$ 1k Ω	-180			
Collector- emitter breakdown voltage	V _{CEO}	I _c = -10 mA, I _B =0	-140			
Emitter - base 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°C			-1	μ A
Collector cut-off current R < 1k Ω	I _{CER}	V _{CE} = -150 V, I _E =0			-50	nA
		V _{CE} = -150 V, I _E =0, Ta = 100°C			-1	μ A
Emitter cut-off current	I _{EBO}	V _{EB} = -6V, I _c =0			-10	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		68		ns
	t _{off}	I _{B2} =100mA, V _{CC} =-50V		1030		
Collector output capacitance	C _{ob}	MHz		40		pF
Transition frequency	f _T	V _{CE} = -10V, I _c = -100mA,f=50MHz		110		MHz

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

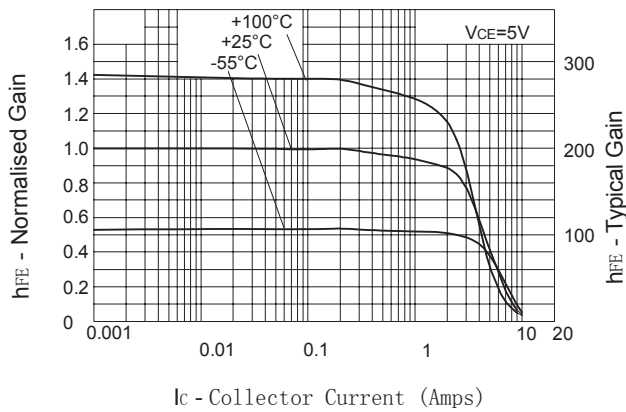
■ Typical Characteristics



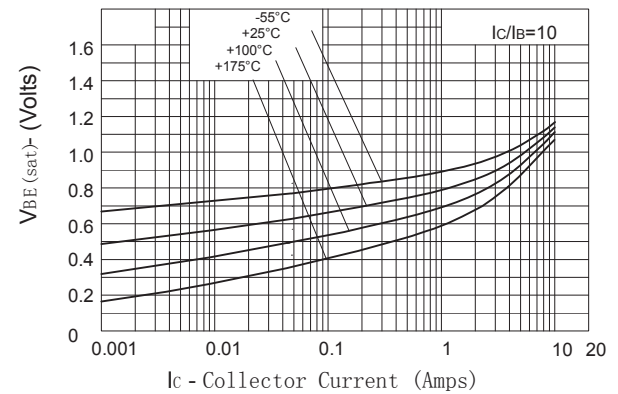
$V_{CE(sat)}$ v I_C



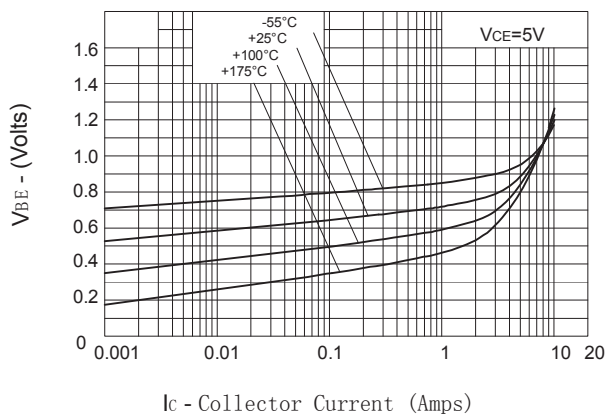
$V_{CE(sat)}$ v I_C



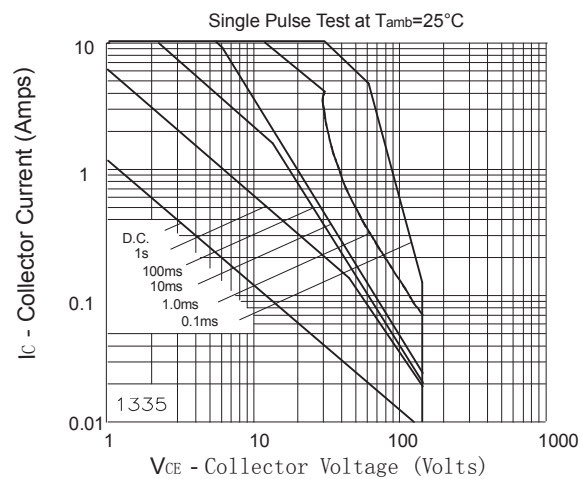
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area