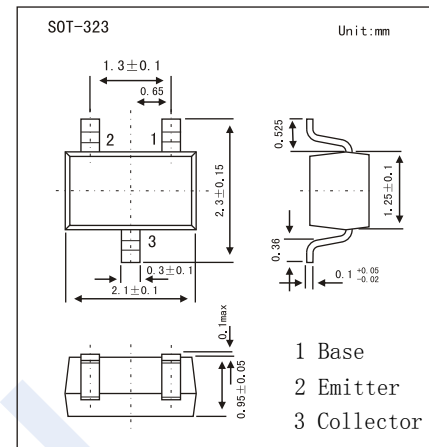


NPN Transistors

2SC5342UF

■ Features

- Large collector current : $I_c=500\text{mA}$
- Low collector saturation voltage enabling low-voltage operation
- Complementary to 2SA1979UF



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	40	V
Collector - Emitter Voltage	V_{CEO}	32	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_c	500	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_c = 100\ \mu\text{A}, I_E = 0$	40			V
Collector-emitter breakdown voltage	V_{CEO}	$I_c = 1\ \text{mA}, I_B = 0$	32			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100\ \mu\text{A}, I_c = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}, I_c = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 100\text{mA}, I_B = 10\text{mA}$			0.25	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 100\text{mA}, I_B = 10\text{mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 1\text{V}, I_c = 100\text{mA}$	70		240	
Collector output capacitance	C_{ob}	$V_{CB} = 6\text{V}, I_E = 0, f = 1\text{MHz}$		7		pF
Transition frequency	f_T	$V_{CE} = 6\text{V}, I_E = -20\text{mA}$		300		MHz

■ Classification of h_{FE}

Type	2SC5342UF-O	2SC5342UF-Y
Range	70-140	120-240
Marking	BO	BY

NPN Transistors 2SC5342UF

■ Typical Characteristics

Fig. 1 $P_c - T_a$

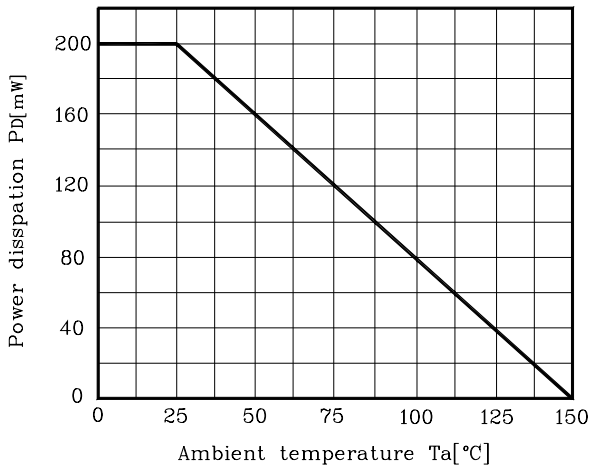


Fig. 2 $I_c - V_{BE}$

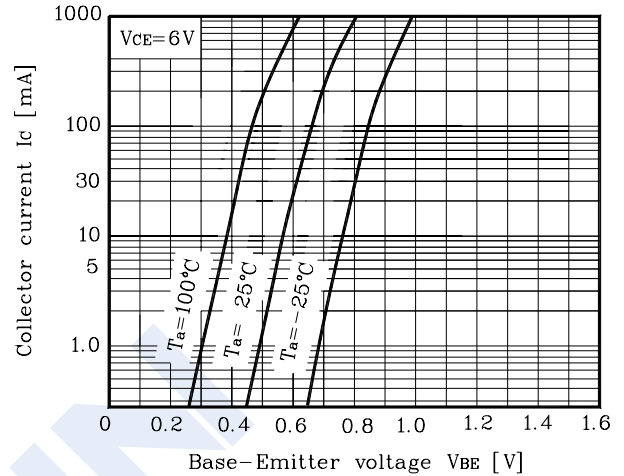


Fig. 3 $I_c - V_{CE}$

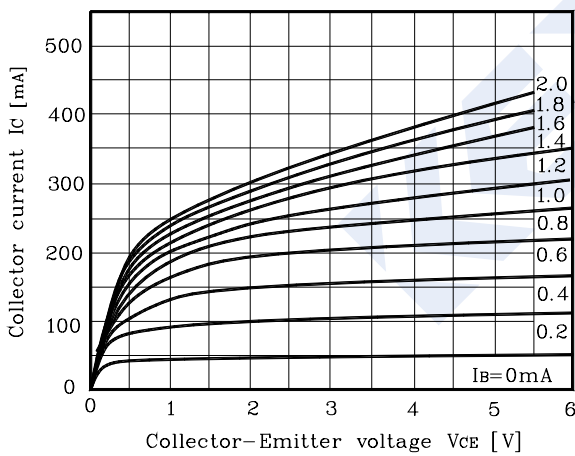


Fig. 4 $V_{CE(SAT)} - I_c$

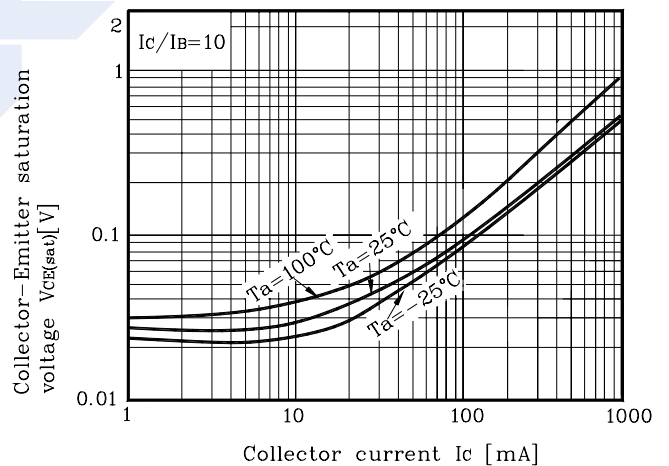


Fig. 5 $h_{FE} - I_c$

