

## Strobe High-Current Switching Applications

## 2SB1215

## ■ Features

- Low collector-to-emitter saturation voltage.
- Excellent linearity of hFE.
- High fT.
- Fast switching time.

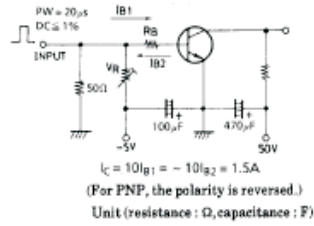


## ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	-120	V
Collector-emitter voltage	V <sub>CEO</sub>	-100	V
Emitter-base voltage	V <sub>EB0</sub>	-6	V
Collector current	I <sub>C</sub>	-3	A
Collector current (pulse)	I <sub>CP</sub>	-6	A
Collector dissipation	P <sub>C</sub>	1	W
T <sub>C</sub> = 25°C		20	W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

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## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector cutoff current	ICBO	V <sub>CB</sub> = -100V , I <sub>E</sub> = 0			-1	μA	
Emitter cutoff current	IEBO	V <sub>EB</sub> = -4V , I <sub>C</sub> = 0			-1	μA	
DC current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -5V , I <sub>C</sub> = -0.5A	70		400		
		V <sub>CE</sub> = -5V , I <sub>C</sub> = -2A	40				
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = -10V , I <sub>C</sub> = -0.5A		130		MHz	
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V , f = 1MHz		40		pF	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -1.5A , I <sub>B</sub> = -0.15A		-200	-500	mV	
Base-to-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -1.5A , I <sub>B</sub> = -0.15A		-0.9	-1.2	V	
Collector-to-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -10μA , I <sub>E</sub> = 0	-120			V	
Collector-to-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA , R <sub>BE</sub> = ∞	-100			V	
Emitter-to-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA , I <sub>C</sub> = 0	-6			V	
Turn-on time	t <sub>on</sub>	 <p> <math>I_C = 10I_{b1} = -10I_{b2} = 1.5A</math>            (For PNP, the polarity is reversed.)            Unit (resistance : Ω, capacitance : F)         </p>		100		ns	
Storage time	t <sub>stg</sub>				800		ns
Fall time	t <sub>f</sub>				50		ns

■ h<sub>FE</sub> Classification

Rank	Q	R	S	T
h <sub>FE</sub>	70~140	100~200	140~280	200~400