



PRODUCT DATA SHEET



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Datasheet



Resources

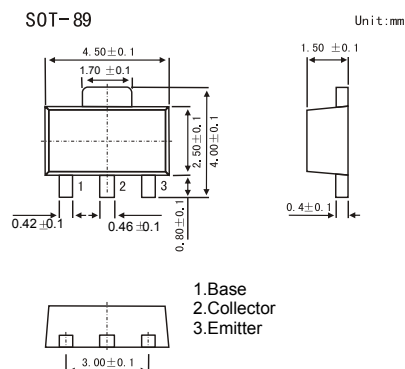


Samples

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

- World standard miniature package:SOT-89.
- High collector to base voltage: $V_{CB0} > 100V$.
- Excellent dc current gain linearity: $h_{FE}=80TYP.$
($V_{CE}=2V$, $I_C=500mA$).



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	100	V
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	1	A
Collector current (pulse) *	I_C	1.5	A
Total power dissipation at $25^{\circ}C$ ambient temperature *	P_T	2	W
Junction temperature	T_j	150	$^{\circ}C$
Storage temperature	T_{stg}	-55 to +150	$^{\circ}C$

*1. $PW \leq 10ms$, duty cycle $\leq 50\%$

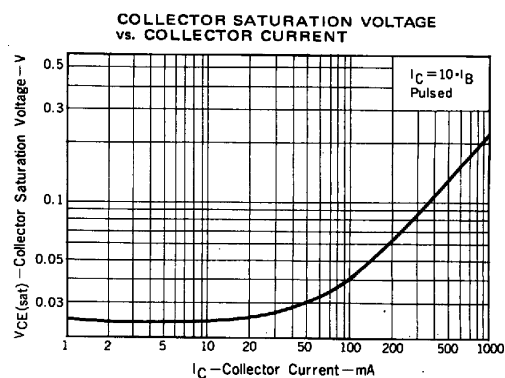
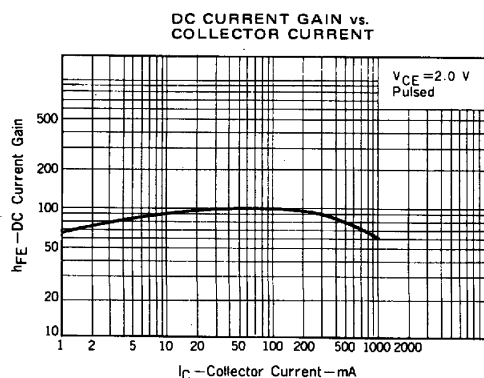
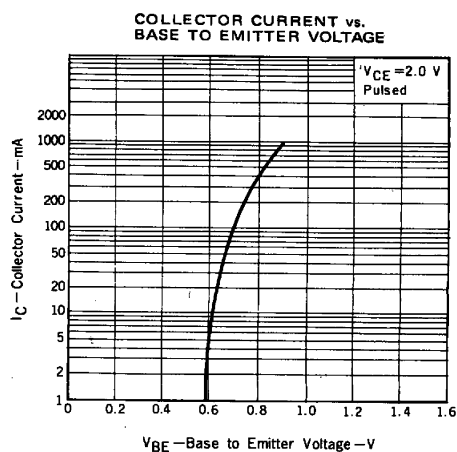
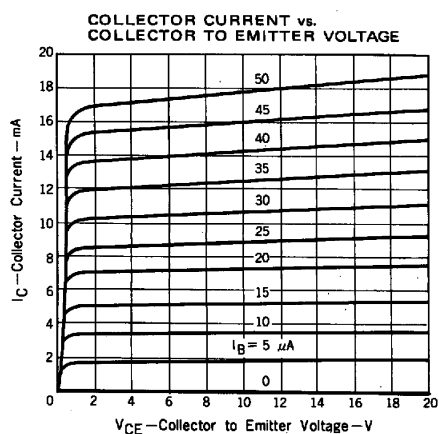
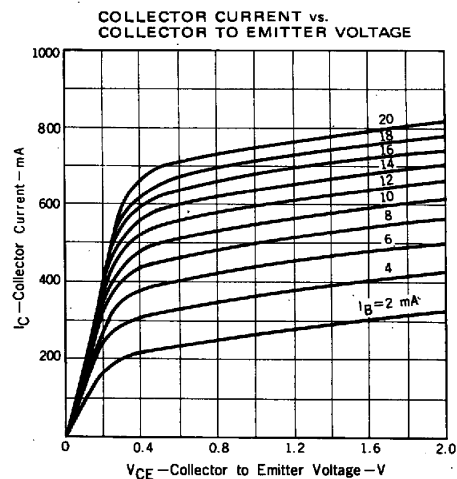
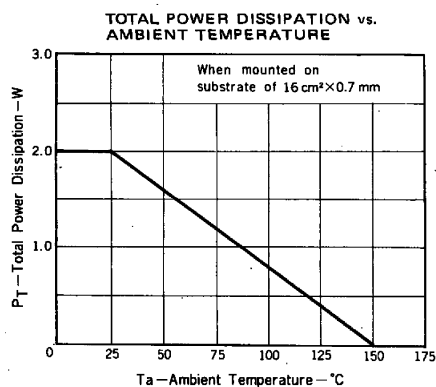
*2. When mounted on ceramic substrate of $16cm^2 \times 0.7mm$

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

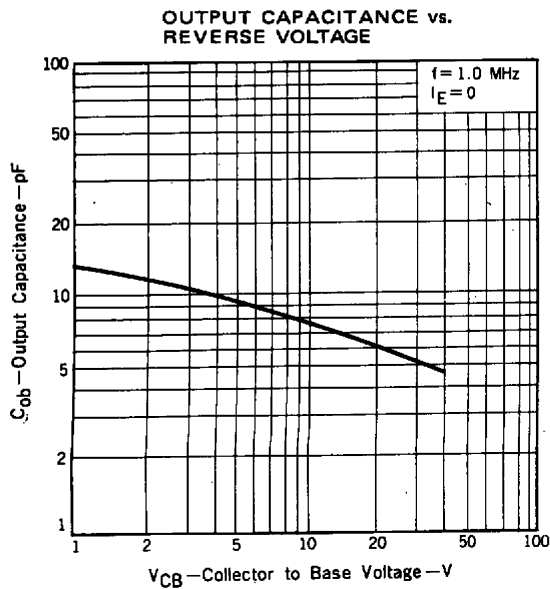
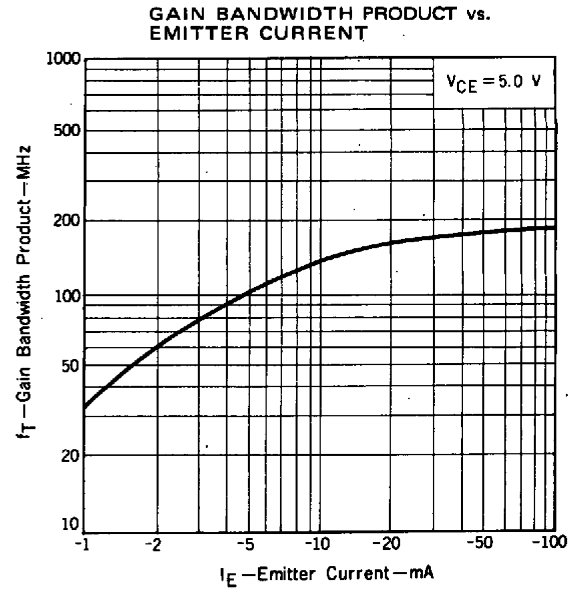
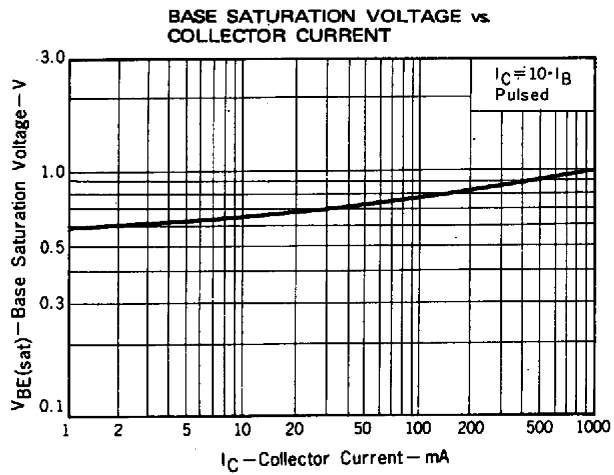
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100 \mu A$, $I_E = 0$	100			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1 mA$, $I_B = 0$	80			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A$, $I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 100 V$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 V$, $I_C = 0$			0.1	
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 500 mA$, $I_B = 50 mA$			0.5	V
Base - emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 500 mA$, $I_B = 50 mA$			1.5	
Base - emitter voltage *	V_{BE}	$V_{CE} = 10 V$, $I_C = 10 mA$	0.6		0.7	
DC current gain *	h_{FE}	$V_{CE} = 2 V$, $I_C = 100 mA$	90	200	400	
		$V_{CE} = 2 V$, $I_C = 500 mA$	45	200		
Collector output capacitance	C_{ob}	$V_{CB} = 10 V$, $I_E = 0$, $f = 1 MHz$		12		pF
Transition frequency	f_T	$V_{CE} = 5 V$, $I_E = -10 mA$		160		MHz

*. $PW \leq 350 \mu s$, duty cycle $\approx 2\%$

■ Typical Characteristics



■ Typical Characteristics



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