

Low frequency amplifier transistor(12V, 2A)

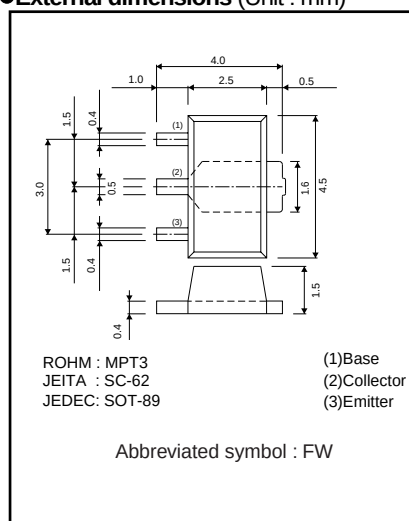
2SD2661

●Features

Low $V_{CE(sat)} \leq 180\text{mV}$

($I_C / I_B = 1\text{A} / 50\text{mA}$)

●External dimensions (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	15	V
Collector-emitter voltage	V_{CEO}	12	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	2	A(DC)
		4	A(Pulse) ^{*1}
Collector Power dissipation	P_C	500	mW
		2 ^{*2}	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

*1 $P_W=1\text{ms}$ Single Pulse

*2 Mounted on a 40×40×0.7mm ceramic substrate

●Packaging specifications

Type	Package	Taping
	Code	T100
	Basic ordering unit (pieces)	1000
2SD2661		○

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CB0}	15	—	—	V	$I_C=10\mu\text{A}$
Collector-emitter breakdown voltage	BV_{CEO}	12	—	—	V	$I_C=1\text{mA}$
Emitter-base breakdown voltage	BV_{EBO}	6	—	—	V	$I_E=10\mu\text{A}$
Collector cutoff current	I_{CBO}	—	—	100	nA	$V_{CB}=15\text{V}$
Emitter cutoff current	I_{EBO}	—	—	100	nA	$V_{EB}=6\text{V}$
DC current transfer ratio	h_{FE}	270	—	680	—	$V_{CE}=2\text{V}$, $I_C=200\text{mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	90	180	mV	$I_C / I_B=1\text{A} / 50\text{mA}$
Transition frequency	f_T	—	360	—	MHz	$V_{CE}=2\text{V}$, $I_E=-200\text{mA}$, $f=100\text{MHz}$
Output capacitance	C_{ob}	—	20	—	pF	$V_{CB}=10\text{V}$, $I_E=0\text{A}$, $f=1\text{MHz}$

Transistors

●Electrical characteristic curves

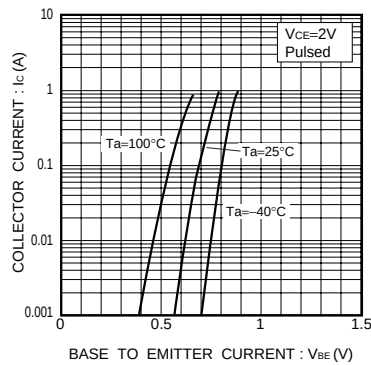


Fig.1 Grounded emitter propagation characteristics

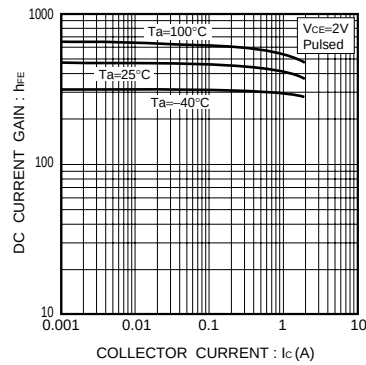


Fig.2 DC current gain vs. collector current

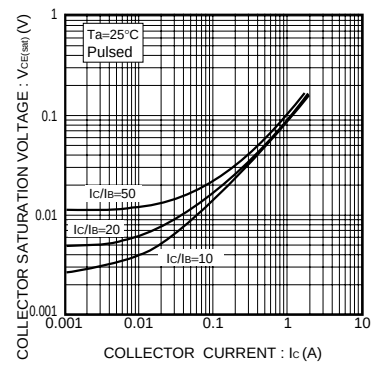


Fig.3 Collector-emitter saturation voltage vs. collector current

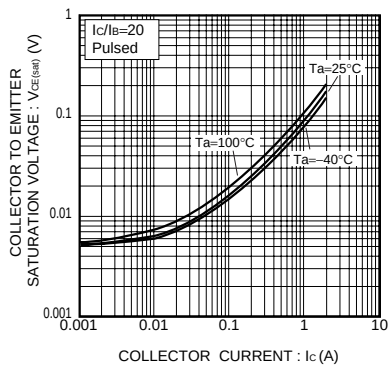


Fig.4 Base-emitter saturation voltage vs. collector current

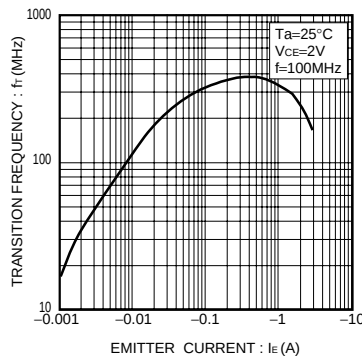
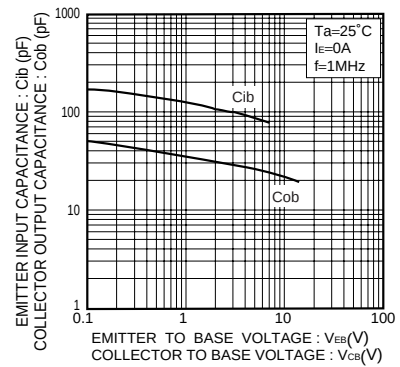


Fig.5 Gain bandwidth product vs. emitter current

Fig.6 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

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