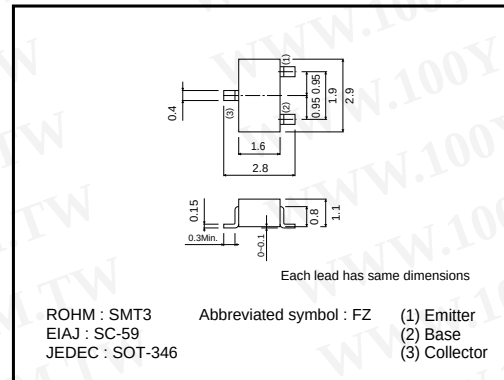


Low frequency amplifier

2SD2657K

- 1) A collector current is large.
- 2) $V_{CE(sat)} \leq 350\text{mV}$
At $I_C = I_A / I_B = 50\text{mA}$



Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	30	V
Collector-emitter voltage	V_{CE0}	30	V
Emitter-base voltage	V_{EB0}	6	V
Collector current	I_C	1.5	A
	I_{CP}	3	A *
Power dissipation	P_C	200	mW
Junction temperature	T_j	150	°C
Range of storage temperature	T_{stg}	-55~+150	°C

*Single pulse, $P_w=1\text{ms}$

Type	Package	Taping
	Code	T146
	Basic ordering unit (pieces)	3000
2SD2657K		○

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	V_{CB0}	30	–	–	V	$I_C=10\mu A$
Collector-emitter breakdown voltage	V_{CEO}	30	–	–	V	$I_C=1mA$
Emitter-base breakdown voltage	V_{EBO}	6	–	–	V	$I_E=10\mu A$
Collector cutoff current	I_{CB0}	–	–	100	nA	$V_{CB}=30V$
Emitter cutoff current	I_{EBO}	–	–	100	nA	$V_{EB}=6V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	160	350	mV	$I_C=1A, I_B=50mA$
DC current gain	h_{FE}	270	–	680	–	$V_{CE}=2V, I_C=100mA^*$
Transition frequency	f_r	–	330	–	MHz	$V_{CE}=2V, I_E=-100mA, f=100MHz^*$
Corrector output capacitance	C_{ob}	–	11	–	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

* Pulsed

Transistors

●Electrical characteristic curves

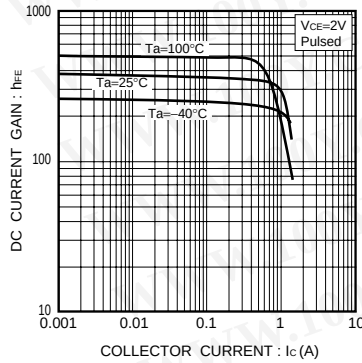


Fig.1 DC current gain vs. collector current

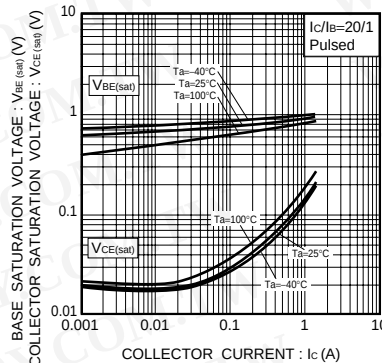


Fig.2 Collector-emitter saturation voltage vs. collector current

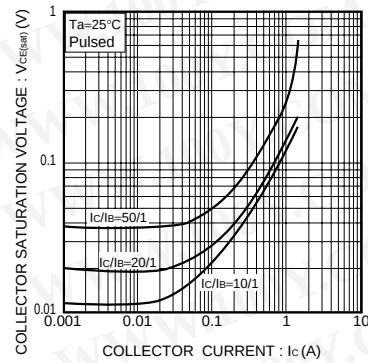


Fig.3 Collector-emitter saturation voltage vs. collector current

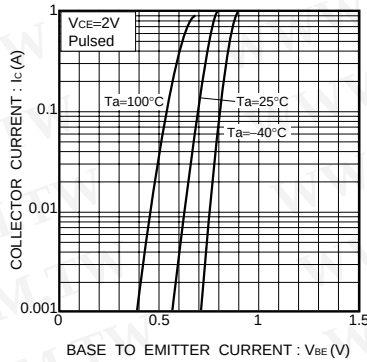


Fig.4 Grounded emitter propagation characteristics

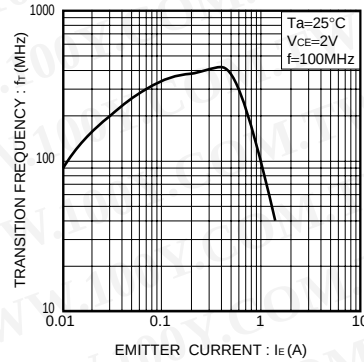


Fig.5 Gain bandwidth product vs. emitter current

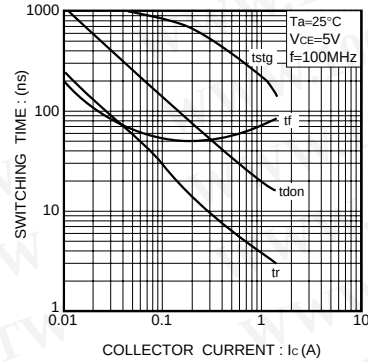


Fig.6 Switching time

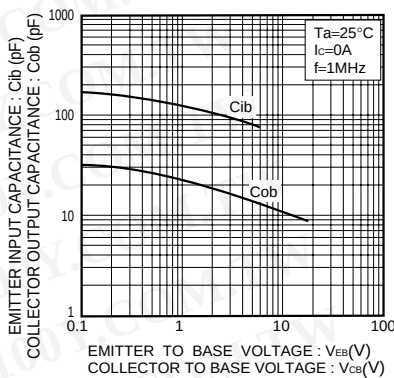


Fig.7 Collector output capacitance vs. collector-base voltage
 Emitter input capacitance vs. emitter-base voltage

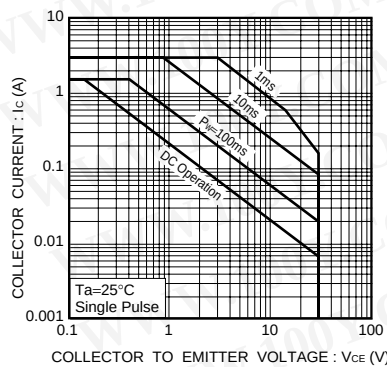


Fig.8 Safe Operating Area

Appendix

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