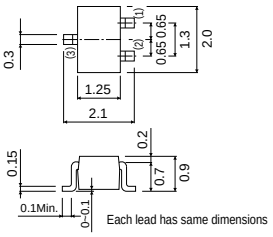
General purpose amplification (12V, 1.5A)

2SD2652

●Application
Low frequency amplifier

●Features
1) A collector current is large.
2) Collector saturation voltage is low.
$V_{CE(sat)} \leq 200mV$
At $I_C = 500mA / I_B = 25mA$

●External dimensions (Units : mm)



ROHM : UMT3
EIAJ : SC-70
JEDEC : SOT-323
Abbreviated symbol : EW
(1) Emitter
(2) Base
(3) Collector

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	15	V
Collector-emitter voltage	V_{CEO}	12	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	1.5	A
	I_{CP}	3	A *
Power dissipation	P_C	200	mW
Junction temperature	Tj	150	°C
Range of storage temperature	Tstg	–55~+150	°C

*Single pulse, P_W=1ms

●Packaging specifications

Type	Package	Taping
	Code	T106
	Basic ordering unit (pieces)	3000
2SD2652		○

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	15	–	–	V	I_C=10μA
Collector-emitter breakdown voltage	BV_{CEO}	12	–	–	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	6	–	–	V	I_E=10μA
Collector cutoff current	I_{CBO}	–	–	100	nA	V_{CB}=15V
Emitter cutoff current	I_{EBO}	–	–	100	nA	V_{EB}=6V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	80	200	mV	I_C/I_B=500mA/25mA
DC current gain	h_{FE}	270	–	680	–	V_{CE}/I_C=2V/200mA *1
Transition frequency	f_T	–	400	–	MHz	V_{CE}=2V, I_E=–200mA, f=100MHz *1
Corrector output capacitance	Cob	–	12	–	pF	V_{CB}=10V, I_E=0A, f=1MHz

*1 Pulsed

●Electrical characteristic curves

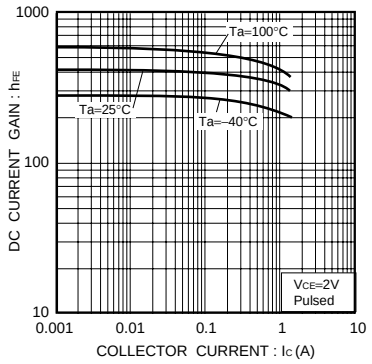


Fig.1 DC current gain vs. collector current

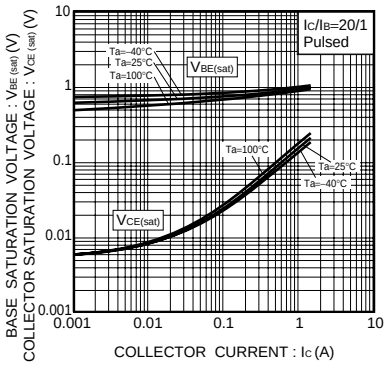


Fig.2 Collector-emitter saturation voltage base-emitter saturation voltage vs. collector current

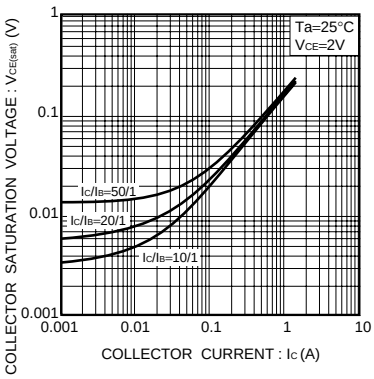


Fig.3 Collector-emitter saturation voltage vs. collector current

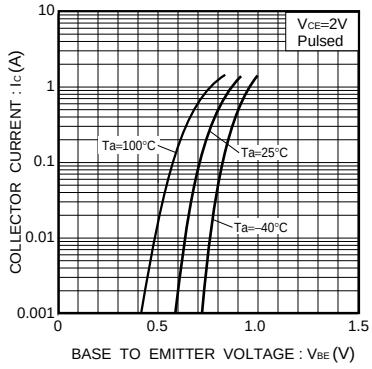


Fig.4 Grounded emitter propagation characteristics

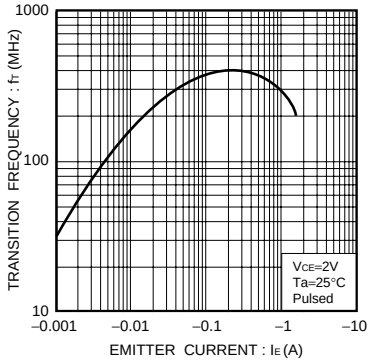


Fig.5 Gain bandwidth product vs. emitter current

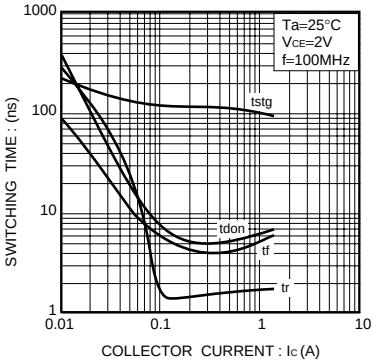


Fig.6 Switching time

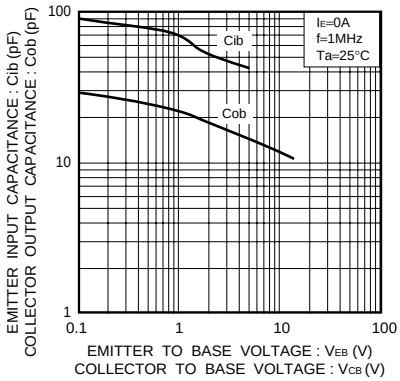


Fig.7 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

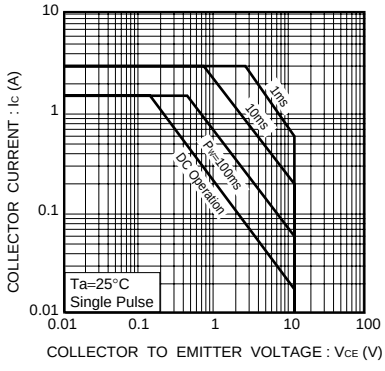


Fig.8 Safe Operating Area

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