Low frequency amplifier

2SD2653K

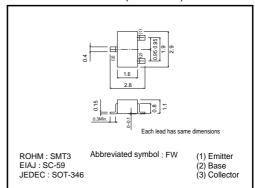
Application

Low frequency amplifier Driver

● Features

- 1) A collector current is large.
- 2) $V_{CE(sat)} \le 180 mV$ At Ic = 1A / IB = 50mA

●External dimensions (Units : mm)



● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	Vсво	15	V
Collector-emitter voltage	Vceo	12	V
Emitter-base voltage	Vево	6	V
Collector current	Ic	2	Α
Collector current	Іср	4	Α*
Power dissipation	Pc	200	mW
Junction temperature	Tj	150	°C
Range of storage temperature	Tstg	-55~+150	°C

^{*}Single pulse, Pw=1ms

● Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions			
Collector-base breakdown voltage	ВУсво	15	_	_	V	Ic=10μA			
Collector-emitter breakdown voltage	BVceo	12	_	_	V	Ic=1mA			
Emitter-base breakdown voltage	ВVево	6	_	_	V	Iε=10μA			
Collector cutoff current	Ісво	-	_	100	nA	VcB=15V			
Emitter cutoff current	ІЕВО	-	_	100	nA	V _{EB} =6V			
Collector-emitter saturation voltage	VCE(sat)	-	90	180	mV	Ic=1A, I _B =50mA			
DC current gain	hfe	270	_	680	_	Vce=2V, Ic=200mA*			
Transition frequency	f⊤	_	360	_	MHz	Vce=2V, Ie=-200mA, f=100MHz*			
Corrector output capacitance	Cob	_	20	_	pF	Vcb=10V, IE=0A, f=1MHz			

^{*} Pulsed

Packaging specifications

	Package	Taping
	Code	T146
Type	Basic ordering unit (pieces)	3000
2SD2653K		0



Electrical characteristic curves

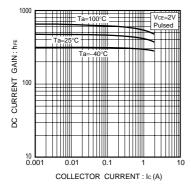


Fig.1 DC current gain vs. collector current

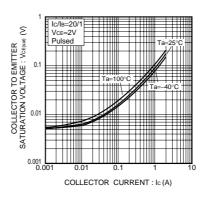


Fig.2 Base-emitter saturation voltage vs. collector current

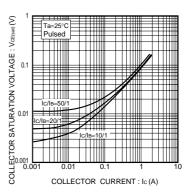


Fig.3 Collector-emitter saturation voltage vs. collector current

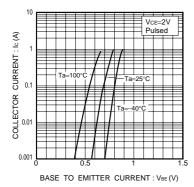


Fig.4 Grounded emitter propagation characteristics

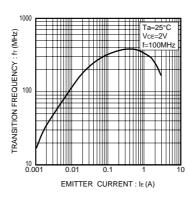


Fig.5 Gain bandwidth product vs. emitter current

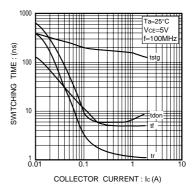


Fig.6 Switching time

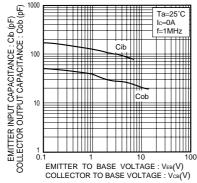


Fig.7 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

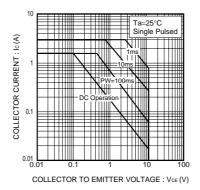


Fig.8 Safe Operating Area

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