# Low frequency amplifier 2SD2653

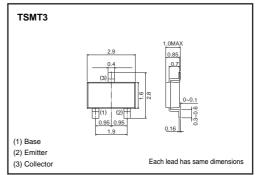
# Application

Low frequency amplifier Driver

#### ● Features

- 1) A collector current is large.
- 2)  $VCE(sat) \le 180mV$ at Ic = 1A/IB = 50mA

### ●External dimensions (Unit : 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	A*1
Power dissipation	Pc	500	mW
Fower dissipation	FC	1*2	W
Junction temperature	Tj	150	°C
Range of storage temperature	Tstg	-55 to +150	°C

#### ●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	ВУево	6	_	_	V	Iε=10μA
Collector cutoff current	Ісво	_	-	100	nA	VcB=15V
Emitter cutoff current	Ієво	_	_	100	nA	V <sub>EB</sub> =6V
Collector-emitter saturation voltage	VCE(sat)	_	90	180	mV	Ic=1A, I <sub>B</sub> =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

<sup>\*</sup> Pulsed

# Packaging specifications

	Package	Taping
	Code	TL
Type	Basic ordering unit (pieces)	3000
2SD2653		0

<sup>\*1</sup> Single pulse, Pw=1ms \*2 Mounted on a 25×25×<sup>†</sup>0.8mm Ceramic substrate

#### Electrical characteristic curves

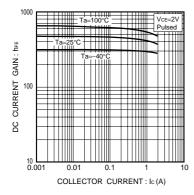


Fig.1 DC current gain vs. collector current

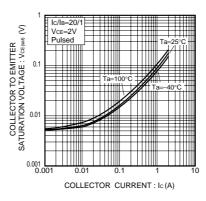


Fig.2 Base-emitter saturation voltage vs. collector current

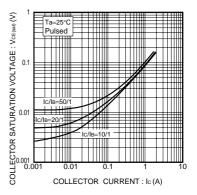


Fig.3 Collector-emitter saturation voltage vs. collector current

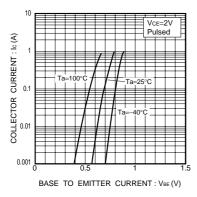


Fig.4 Grounded emitter propagation characteristics

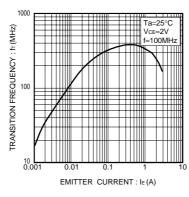


Fig.5 Gain bandwidth product vs. emitter current

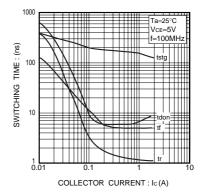


Fig.6 Switching time

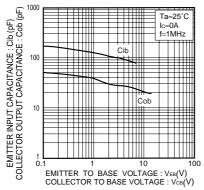


Fig.7 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

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