Low frequency amplifier (-30V, -1.5A)

US6T7

Application

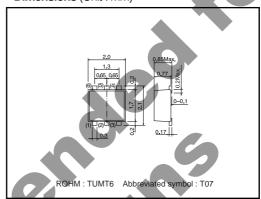
Low frequency amplifier Driver

● Features

1) A collector current is large.

2) VCE(sat): max. -370mV At Ic = -1A/IB = -50mA

●Dimensions (Unit:mm)

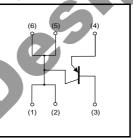


● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	Vсво	-30	V
Collector-emitter voltage	Vceo	-30	V
Emitter-base voltage	Vево	-6	V
Collector current	Ic	-1.5	A
Collector current	Icp	-3	A *1
Power dissipation	Pc	400	mW *2
rowei dissipation	PC	1.0	W *3
Junction temperature	Tj	150	°C
Range of storage temperature	Tstg	-55 to +150	°C

- *1 Single pulse, Pw=1ms
- *2 Each Terminal Mounted on *3 Mounted on a 25mm×25mr

●Equivalent circuit



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	-30	_	_	V	Ic=-10μA
Collector-emitter breakdown voltage	BVceo	-30	-	_	V	Ic=-1mA
Emitter-base breakdown voltage	ВУево	-6	_	_	V	Iε=-10μA
Collector cutoff current	Ісво	_	_	-100	nA	Vcb=-30V
Emitter cutoff current	Ієво	_	-	-100	nA	V _{EB} =-6V
Collector-emitter saturation voltage	VcE(sat)	_	-190	-370	mV	Ic=-1A, I _B =-50mA
DC current gain	hfe	270	-	680	_	Vce=-2V, Ic=-100mA*
Transition frequency	f⊤	_	280	_	MHz	Vce=-2V, Ie=100mA, f=100MHz*
Collector output capacitance	Cob	_	13	_	pF	Vcb=-10V, Ie=0A, f=1MHz

^{*} Pulsed

Packaging specifications

	Package	Taping
Туре	Code	TR
	Basic ordering unit (pieces)	3000
US6T7		0

•Electrical characteristic curves

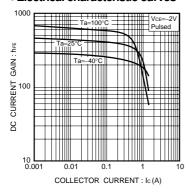


Fig.1 DC current gain vs. collector current

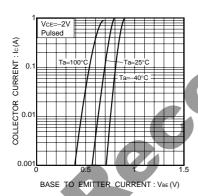


Fig.4 Grounded emitter propagation characteristics

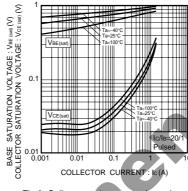


Fig.2 Collector-emitter saturation voltage base-emitter saturation voltage vs. collector current

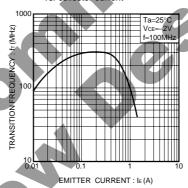


Fig.5 Gain bandwidth product vs. emitter current

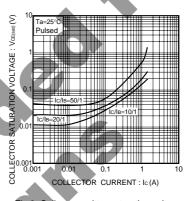


Fig.3 Collector-emitter saturation voltage vs. collector current

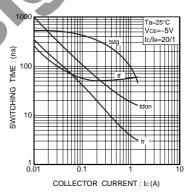


Fig.6 Switching time

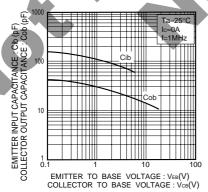


Fig.7 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

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