Low frequency amplifier US6T4

Application

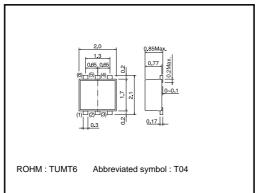
Low frequency amplifier Driver

● Features

1) A collector current is large. 2) VCE(sat): max. -250mV

At Ic=-1.5A / IB=-30mA

●Dimensions (Unit:mm)

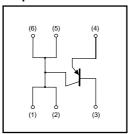


● Absolute maximum ratings (Ta=25°C)

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	-3	Α
Collector current	Іср	-6	A *1
Power dissipation	Pc	400	mW *2
Fower dissipation	FC	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 Termminal Mounted on a Recommended
 *3 Mounted on a 25mm×25mm×10.8mm Ceramic substrate.

●Equivalent circuit



●Electrical characteristics (Ta=25°C)

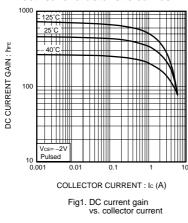
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	-15	-	_	V	Ic= -10μA
Collector-emitter breakdown voltage	BVceo	-12	_	_	V	Ic=-1mA
Emitter-base breakdown voltage	ВУЕВО	-6	-	_	V	I _E = -10μA
Collector cutoff current	Ісво	_	-	-100	nA	Vcb= -15V
Emitter cutoff current	ІЕВО	_	-	-100	nA	V _{EB} = -6V
Collector-emitter saturation voltage	VCE(sat)	_	-120	-250	mV	Ic= -1.5A, I _B = -30mA
DC current gain	hfe	270	_	680	_	Vc=-2V, Ic=-500mA *
Transition frequency	f⊤	_	280	_	MHz	Vc=-2V, I=500mA, f=100MHz *
Collector output capacitance	Cob	ı	30	_	pF	Vcb= -10V, Ie=0A, f=1MHz

^{*} Pulsed

Packaging specifications

	Package	Taping
Type	Code	TR
	Basic ordering unit (pieces)	3000
US6T4		0

•Electrical characteristic curves



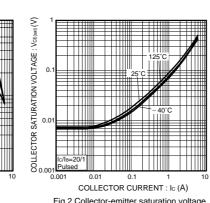


Fig.2 Collector-emitter saturation voltage vs. collector current

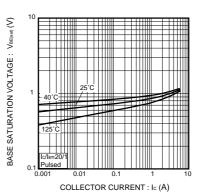
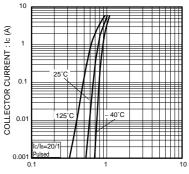


Fig.3 Base–emitter saturation voltage vs.collector current



BASE TO EMITTER CURRENT : VBE (V)

Fig.4 Grounded emitter propagation charactereistics

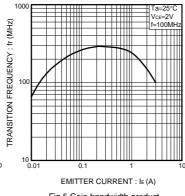


Fig.5 Gain bandwidth product vs. emitter current

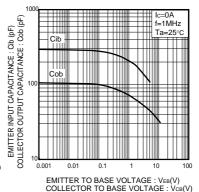


Fig 6. Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base volatage

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