Low frequency amplifier

US6T4

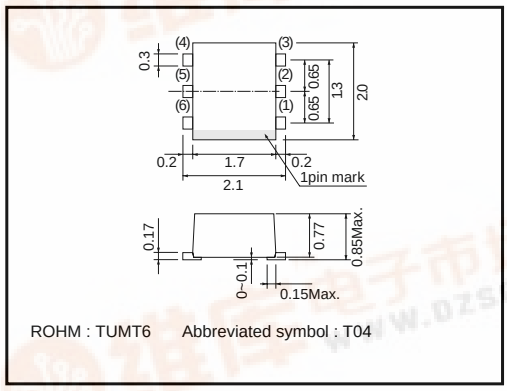
●Application

Low frequency amplifier
Driver

●Features

1) A collector current is large.
2) $V_{CE(sat)}$: max. –250mV
At I_C=–1.5A / I_B=–30mA

●External dimensions (Unit : mm)



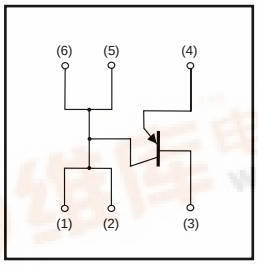
ROHM : TUMT6 Abbreviated symbol : T04

●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	–3	A
	I_{CP}	–6	A *1
Power dissipation	P_C	400	mW *2
		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×t0.8mm Ceramic substrate.

●Equivalent circuit



●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	$V_{CE(sat)}$	–	–120	–250	mV	I_C= –1.5A, I_B= –30mA
DC current gain	h_{FE}	270	–	680	–	V_{CE}= –2V, I_C= –500mA *
Transition frequency	f_T	–	280	–	MHz	V_{CE}= –2V, I_E=500mA, f=100MHz *
Collector output capacitance	Cob	–	30	–	pF	V_{CB}= –10V, I_E=0A, f=1MHz

* Pulsed

●Packaging specifications

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

●Electrical characteristic curves

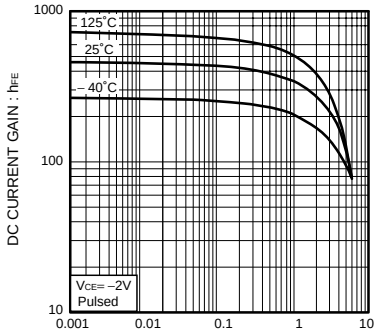


Fig1. DC current gain vs. collector current

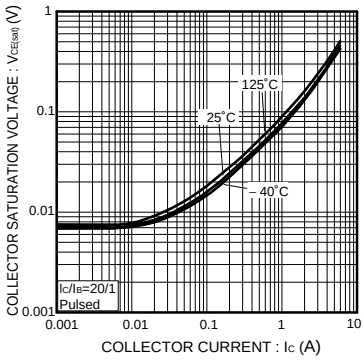


Fig.2 Collector-emitter saturation voltage vs. collector current

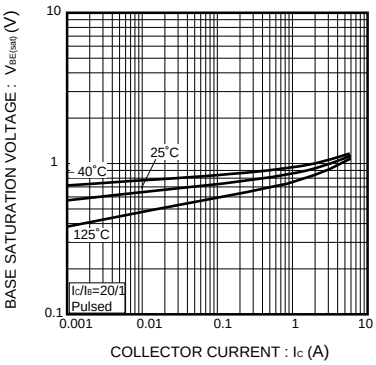


Fig.3 Base–emitter saturation voltage vs.collector current

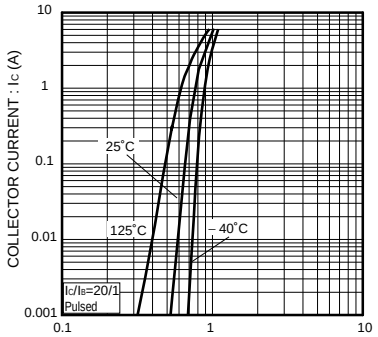


Fig.4 Grounded emitter propagation characterestics

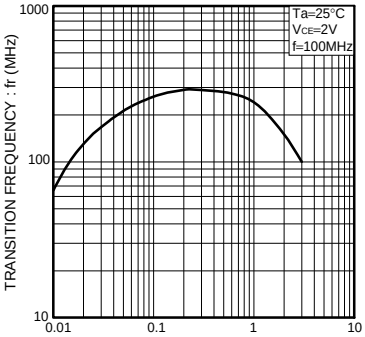


Fig.5 Gain bandwidth product vs. emitter current

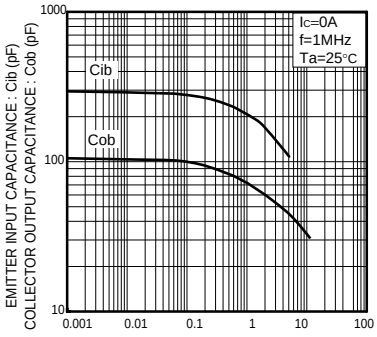


Fig 6. Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base volatage

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