

US6T5

Low frequency amplifier
Driver

- 1) A collector current is large.
- 2) $V_{CE(sat)}$: max. -370mV
At $I_C = -1.5\text{A} / I_B = -75\text{mA}$

The drawing shows the mechanical specifications for the ROHM TUMT6 package. The top view includes dimensions for the overall width (2.1), length (1.7), and thickness (0.2). It also shows the pin pitch (0.65) and the distance from the pin center to the package edge (0.13). The side view shows the package height (0.85Max.) and the distance from the pin center to the package edge (0.17). The drawing is labeled with 'ROHM' and 'TUMT6'.

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	-30	V
Collector-emitter voltage	V_{CEO}	-30	V
Emitter-base voltage	V_{EBO}	-6	V
Collector current	I_C	-2	A
	I_{CP}	-4	A *1
Power dissipation	P_C	400	mW *2
		1.0	W *3
Junction temperature	T_j	150	°C
Range of storage temperature	T_{stg}	-55 to +150	°C

*1 Single pulse, Pw=1ms

*2 Each terminal mounted on a recommended

*3 Mounted on a 25mm×25mm×^t0.8mm Ceramic substrate.

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	-30	-	-	V	$I_C = -10\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	-30	-	-	V	$I_C = -1mA$
Emitter-base breakdown voltage	BV_{EBO}	-6	-	-	V	$I_E = -10\mu A$
Collector cutoff current	I_{CBO}	-	-	-100	nA	$V_{CB} = -30V$
Emitter cutoff current	I_{EBO}	-	-	-100	nA	$V_{EB} = -6V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-180	-370	mV	$I_C = -1.5A, I_B = -75mA$
DC current gain	h_{FE}	270	-	680	-	$V_{CE} = -2V, I_C = -200mA$
Transition frequency	f_T	-	280	-	MHz	$V_{CE} = -2V, I_E = 200mA, f = 100MHz$
Collector output capacitance	C_{ob}	-	20	-	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

Transistors

●Packaging specifications

Type	package	Taping
	Code	TR
	Basic ordering unit(pieces)	3000
US6T5		○

●Electrical characteristic curves

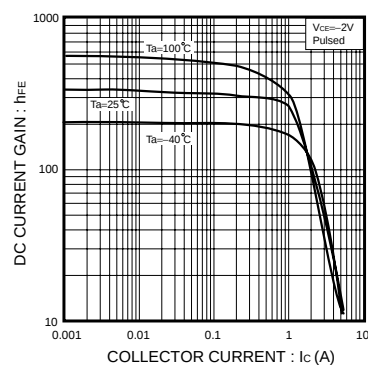


Fig.1 DV current gain vs. collector current

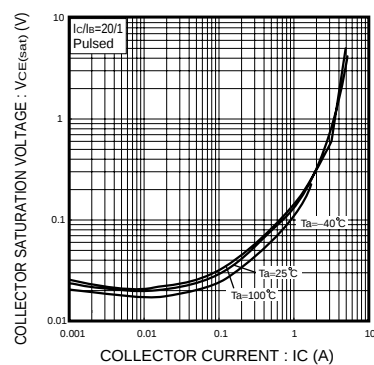


Fig.2 Collector-emitter saturation voltage vs. collector current

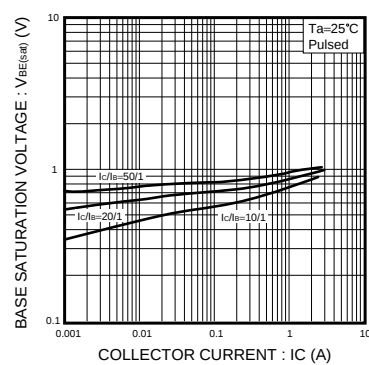


Fig.3 Base-emitter saturation voltage vs. collector current

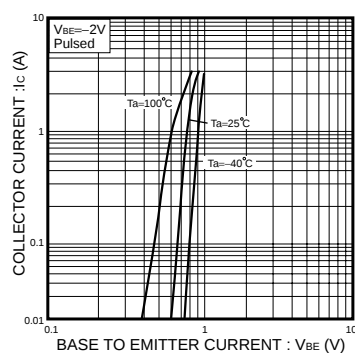


Fig.4 Grounded emitter propagation characteristics

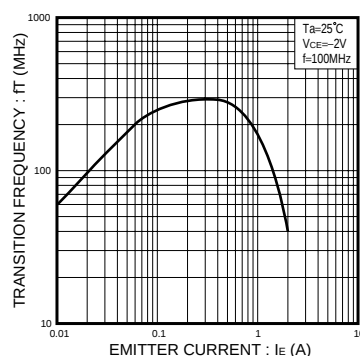


Fig.5 Gain bandwidth product vs. emitter current

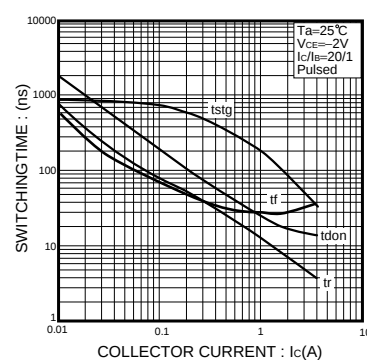
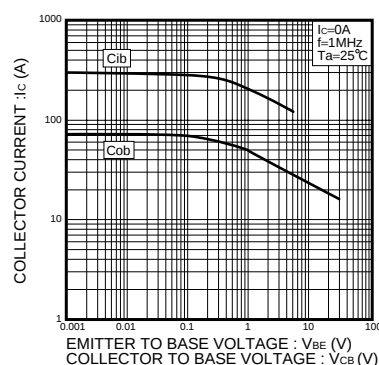


Fig.6 Switching time

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

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