

Low frequency amplifier

US6X3

●Application

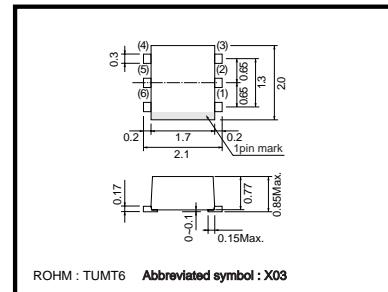
Low frequency amplifier

Driver

● Features

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

● **External dimensions** (Unit : mm)



● Absolute maximum ratings (Ta=25°C)

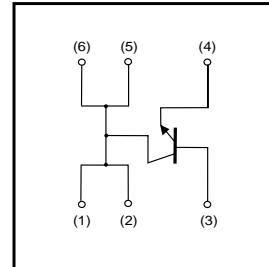
Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	15	V
Collector-emitter voltage	V_{CEO}	12	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	3	A
	I_{CP}	6	A^{*1}
Power dissipation	P_C	400	mW^{*2}
		1.0	W^{*3}
Junction temperature	T_J	150	°C
Range of storage temperature	T_{STG}	-55 to +150	°C

*1 Single pulse, Pw=1ms

*2 Each terminal mounted on a recommended

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

● Equivalent circuit



● Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	15	—	—	V	$I_C=10\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	12	—	—	V	$I_C=1mA$
Emitter-base breakdown voltage	BV_{EBO}	6	—	—	V	$I_E=10\mu A$
Collector cutoff current	I_{CBO}	—	—	100	nA	$V_{CB}=15V$
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	—	360	—	MHz	$V_{CE}=2V, I_E=-500mA, f=100MHz$ *
Collector output capacitance	C_{ob}	—	20	—	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

* Pulse

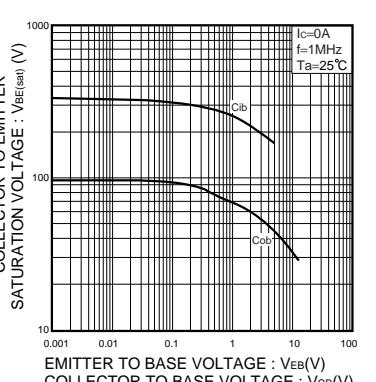
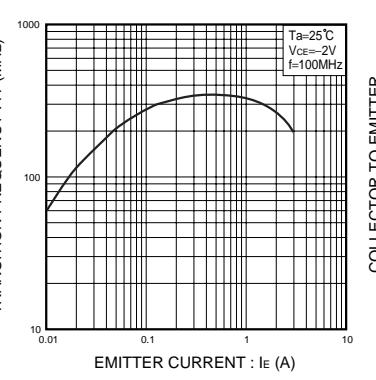
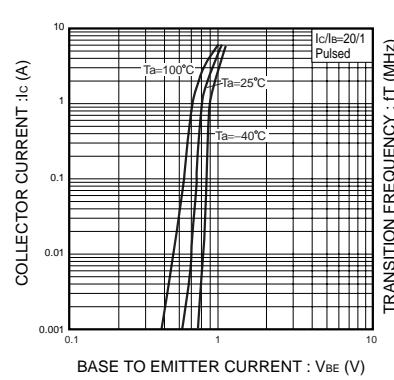
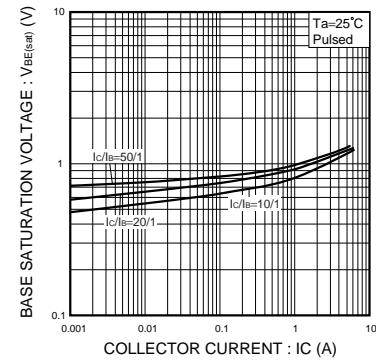
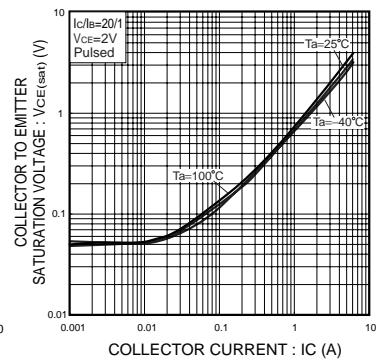
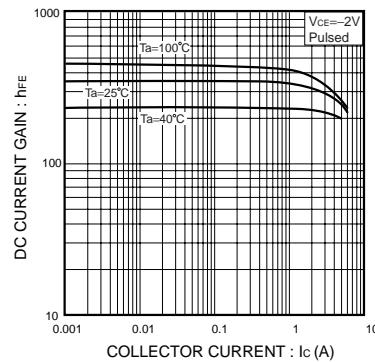
Transistors

●Packaging specifications

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

US6X3

●Electrical characteristic curves



Appendix

Notes

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