General purpose amplification (-12V, -1.5A) QST8

Application

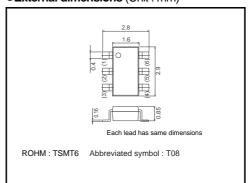
Low frequency amplifier Driver

●Features

- 1) A collector current is large.
- 2) Collector saturation voltage is low.

 $V_{CE (sat)}$: max. -200 mVAt $I_C = -500 \text{mA} / I_B = -25 \text{mA}$

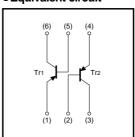
●External dimensions (Unit: mm)



● Absolute maximum ratings (Ta=25°C)

		•	,	
	Parameter	Symbol	Limits	Unit
Collec	tor-base voltage	Vсво	-15	V
Collec	tor-emitter voltage	Vceo	-12	V
Emitter-base voltage		Vево	-6	V
Collog	tor current	lc	-1.5	Α
Collec	tor current	ICP	-3	A *1
			500	mW/TOTAL *2
Power	dissipation	Pc	1.25	W/TOTAL *3
			0.9	W/ELEMENT *3
Junctio	on temperature	Tj	150	°C
Range	of storage temperature	Tstg	-55 to +150	°C

●Equivalent circuit



- *1 Single pulse, Pw=1ms
 *2 Each Terminal Mounted on a Recommended
 *3 Mounted on a 25mm×25mm×¹ 0.8mm ceramic substrate

●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	BVEBO	-6	_	_	V	I _E = -10μA
Collector cutoff current	Ісво	_	_	-100	nA	VcB= -15V
Emitter cutoff current	Ієво	_	_	-100	nA	V _{EB} = -6V
Collector-emitter saturation voltage	VCE(sat)	_	-85	-200	mV	Ic= -500mA, I _B = -25mA
DC current gain	hfe	270	_	680	_	Vce= -2V, Ic= -200mA*
Transition frequency	f⊤	_	400	_	MHz	Vc=-2V, I=200mA, f=100MHz *
Corrector output capacitance	Cob	_	12	_	pF	Vcb= -10V, Ie=0A, f=1MHz

*Pulsed

Packaging specifications

	Package	Taping
Type	Code	TR
	Basic ordering unit (pieces)	3000
QST8		0

•Electrical characteristic curves

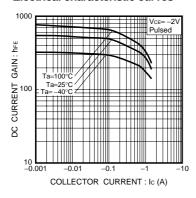


Fig.1 DC current gain vs. collector current

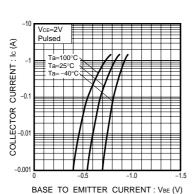


Fig.4 Grounded emitter propagation characteristics

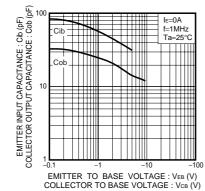


Fig.7 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

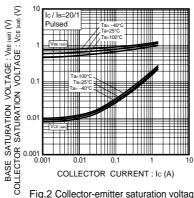


Fig.2 Collector-emitter saturation voltage base-emitter saturation voltage vs. collector current

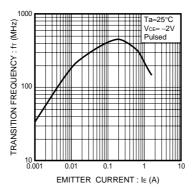


Fig.5 Gain bandwidth product vs. emitter current

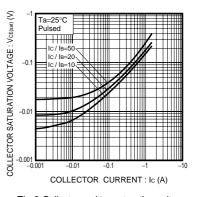


Fig.3 Collector-emitter saturation voltage vs. collector current

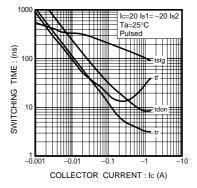


Fig.6 Switching time

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