Low frequency amplifier QST5

Application

Low frequency amplifier Driver

● Features

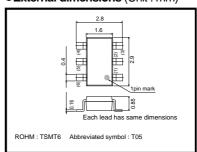
1) A collector current is large. 2) V_{CE(sat)}: max. -370mV At $Ic = -1.5A / I_B = -75mA$

● Absolute maximum ratings (Ta=25°C)

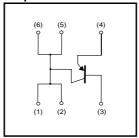
Parameter	Symbol	Limits	Unit
Collector-base voltage	Vсво	-30	V
Collector-emitter voltage	Vceo	-30	V
Emitter-base voltage	Vево	-6	V
Collector current	Ic	-2	Α
Collector current	ICP	-4	A *1
Power dissipation	Do	500	mW *2
	Pc	1.25	W *3
Junction temperature	Tj	150	°C
Range of storage temperature	Tstg	-55 to +150	°C

- *1 Single pulse, Pw=1ms
 *2 Each terminal mounted on a recommended
 *3 Mounted on a 25mm×25mm×10.8mm ceramic substrate

●External dimensions (Unit: mm)



●Equivalent circuit



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	-30	_	_	V	Ic=-10μA
Collector-emitter breakdown voltage	BVceo	-30	_	_	V	Ic=-1mA
Emitter-base breakdown voltage	BVEBO	-6	_	_	V	I _E = -10μA
Collector cutoff curent	Ісво	_	_	-100	nA	Vcb= -30V
Emitter cutoff current	ІЕВО	_	_	-100	nA	V _{EB} = -6V
Collector-emitter saturation voltage	VCE(sat)	_	-180	-370	mV	Ic= -1.5A, I _B = -75mA
DC current gain	hfe	270	_	680	_	Vce= -2V, Ic= -200mA
Transition frequency	f⊤	_	280	_	MHz	Vc=-2V, I=200mA, f=100MHz
Collector output capacitance	Cob	-	20	_	pF	Vсв= −10V, I∈=0A, f=1MHz

Packaging specifications

	package	Taping
Type	Code	TR
	Basic ordering unit(pieces)	3000
QST5		0

•Electrical characteristic curves

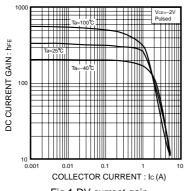


Fig.1 DV current gain vs. collector current

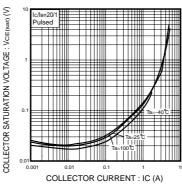


Fig.2 Collector-emitter saturation voltage vs. collector current

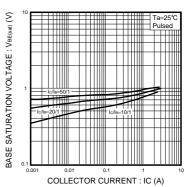


Fig.3 Base-emitter saturation voltage vs. collector current

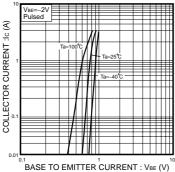


Fig.4 Grounded emitter propagation characteristics

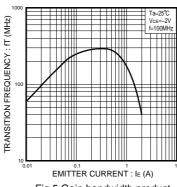
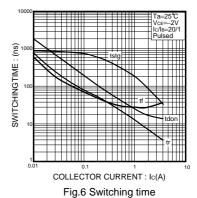


Fig.5 Gain bandwidth product vs. emitter curent

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

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