Low frequency amplifier (-30V, -2A) US6T5

Application

Low frequency amplifier Driver

Features

1) A collector current is large.

2) V_{CE(sat)} : max. -370mV

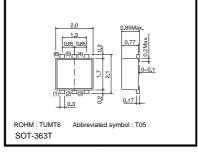
At Ic= $-1.5A / I_B = -75mA$

•Absolute maximum ratings (Ta=25°C)

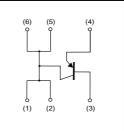
Parameter	Symbol	Limits	Unit
Collector-base voltage	Vсво –30		V
Collector-emitter voltage	Vceo	-30	V
Emitter-base voltage	Vebo	-6	V
Collector current	lc	-2	A
Collector current	Іср	-4	A *1
Power dissipation	Pc	400	mW *2
Power dissipation	FC	1.0	W *3
Junction temperature	Tj	150	°C
Range of storage temperature	Tstg	-55 to +150	°C

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

•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	ВVево	-6	-	-	V	I _E =-10μA
Collector cutoff curent	Ісво	-	-	-100	nA	Vcb=-30V
Emitter cutoff current	Іево	-	-	-100	nA	Veb=-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	Vce=-2V, Ie=200mA, f=100MHz
Collector output capacitance	Cob	-	20	-	pF	Vcb=-10V, Ie=0A, f=1MHz

US6T5

Transistors

100

COLLECTOR CURRENT : Ic (A)

0.0

•Packaging specifications

	package	Taping
Туре	Code	TR
	Basic ordering unit(pieces)	3000
US6T5		0

•Electrical characteristic curves

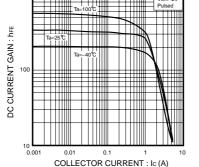


Fig.1 DV current gain vs. collector current

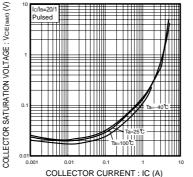


Fig.2 Collector-emitter saturation voltage vs. collector current

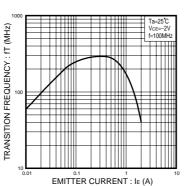
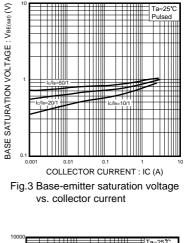


Fig.5 Gain bandwidth product vs. emitter curent



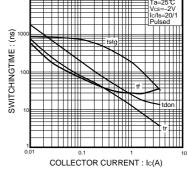
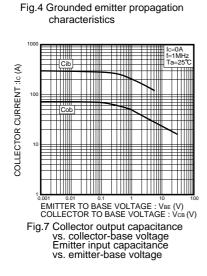


Fig.6 Switching time



BASE TO EMITTER CURRENT : VBE (V)

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2/2

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