

High-frequency Amplifier Transistor (25V, 50mA, 300MHz)

2SC5659 / 2SC4618 / 2SC4098 / 2SC2413K

Features

- 1) Low collector capacitance. (Cob: Typ. 1.3pF)
- 2) Low rbb, high gain, and excellent noise characteristics.

●Absolute maximum ratings (Ta=25°C)

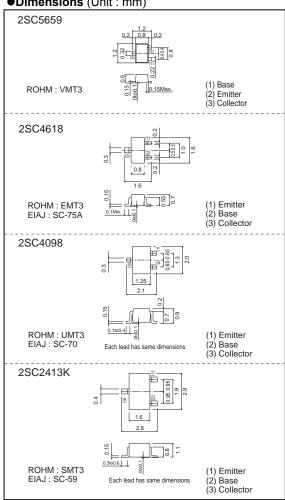
	Parameter	Symbol	Limits	Unit	
Collector-ba	se voltage	Vсво	40	V	
Collector-en	Collector-emitter voltage		25	V	
Emitter-base	mitter-base voltage		5	V	
Collector cu	llector current		50	mA	
Collector power dissipation	2SC5659, 2SC4618	Pc Pc	0.15	W	
	2SC4098, 2SC2413K		0.2		
Junction ten	n temperature Tj		150	°C	
Storage tem	Storage temperature		-55 to +150	°C	

●Packaging specifications and hFE

Туре	2SC5659	2SC4618	2SC4098	2SC2413K
Package	VMT3	EMT3	UMT3	SMT3
hfe	Р	Р	Р	Р
Marking	A*	Α*	A*	A*
Code	T2L	TL	T106	T146
Basic ordering unit (pieces)	8000	3000	3000	3000

^{*} Denotes her

●Dimensions (Unit: mm)



●Electrical characteristics (Ta=25°C)

• Liectifical Characteristics (T
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	40	-	-	V	Ic=50μA
Collector-emitter breakdown voltage	BVceo	25	-	-	V	Ic=1mA
Emitter-base breakdown voltage	ВУєво	5	-	-	V	Iε=50μA
Collector cutoff current	Ісво	-	-	0.5	μΑ	Vcb=24V
Emitter cutoff current	Ієво	-	-	0.5	μΑ	V _{EB} =3V
Collector-emitter saturation voltage	VCE(sat)	-	0.1	0.3	V	Ic/I _B =10mA/1mA
DC current transfer ratio	hfe	82	-	180	-	VcE=6V, Ic=1mA
Transition frequency	f⊤	150	300	-	MHz	VcE=6V, IE= -1mA, f=100MHz
Output capacitance	Cob	-	1.3	2.2	pF	Vcb=6V, IE=0A, f=1MHz

•Electrical characteristics curves

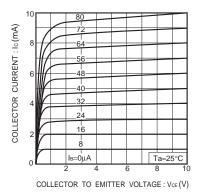


Fig.1 Ground emitter output characteristics

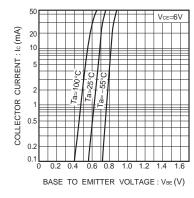


Fig.2 Ground emitter propagation characteristics

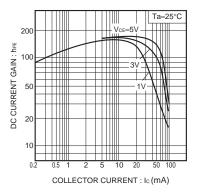


Fig.3 DC current gain vs. collector current (I)

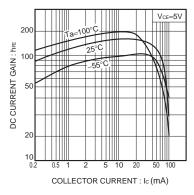


Fig.4 DC current gain vs. collector current ($\rm II$)

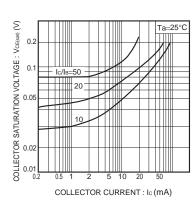


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

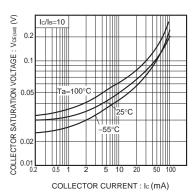


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

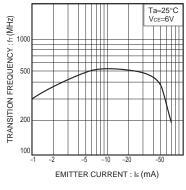


Fig.7 Gain bandwidth product vs.emitter current

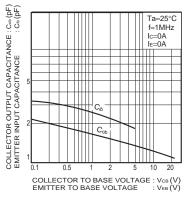


Fig.8 Capacitance vs. voltage

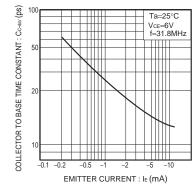


Fig.9 Collector to base time constance vs. emitter current

Notes

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