

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

2SC5659 / 2SC4618 / 2SC4098 / 2SC2413K / 2SC2058S

●Features

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

●Absolute maximum ratings (Ta=25°C)

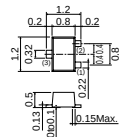
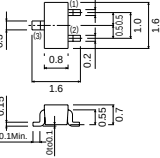
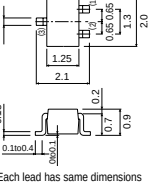
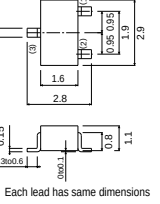
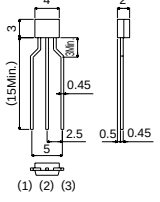
Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	40	V
Collector-emitter voltage	V _{CE0}	25	V
Emitter-base voltage	V _{EB0}	5	V
Collector current	I _c	50	mA
Collector power dissipation	P _c	0.15	W
		0.2	
		0.3	
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55→+150	°C

●Packaging specifications and hFE

Type	2SC5659	2SC4618	2SC4098	2SC2413K	2SC2058S
Package	VMT3	EMT3	UMT3	SMT3	SPT
hFE	NPQ	NPQ	NPQ	NPQ	P
Marking	A*	A*	A*	A*	—
Code	T2L	TL	T106	T146	TP
Basic ordering unit (pieces)	8000	3000	3000	3000	5000

* Denotes hFE

●External dimensions (Units : mm)

2SC5659		(1) Base (2) Emitter (3) Collector
2SC4618		(1) Emitter(Source) (2) Base(Gate) (3) Collector(Drain)
2SC4098		(1) Emitter(Source) (2) Base(Gate) (3) Collector(Drain)
2SC2413K		(1) Emitter(Source) (2) Base(Gate) (3) Collector(Drain)
2SC5058S		(1) Emitter (2) Collector (3) Base

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2SC2413 / 2SC2058S

Transistors

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	40	-	-	V	I _C =50μA
Collector-emitter breakdown voltage	BV _{CE0}	25	-	-	V	I _C =1mA
Emitter-base breakdown voltage	BV _{EB0}	5	-	-	V	I _E =50μA
Collector cutoff current	I _{CB0}	-	-	0.5	μA	V _{CB} =24V
Emitter cutoff current	I _{EB0}	-	-	0.5	μA	V _{EB} =3V
Collector-emitter saturation voltage	V _{CE(sat)}	-	0.1	0.3	V	I _C /I _B =10mA/1mA
DC current transfer ratio	h _{FE}	56	-	270	-	V _{CE} =6V, I _C =1mA
		82	-	180	-	
Transition frequency	f _T	150	300	-	MHz	V _{CE} =6V, I _E =-1mA, f=100MHz
Output capacitance	C _{ob}	-	1.3	2.2	pF	V _{CB} =6V, I _E =0A, f=1MHz