

**2SC5659 / 2SC4618H / 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)

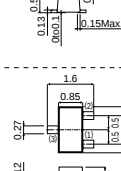
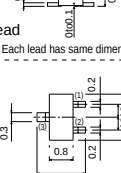
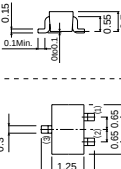
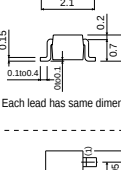
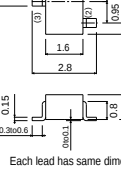
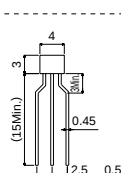
Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	40	V
Collector-emitter voltage	V _{CE0}	25	V
Emitter-base voltage	V _{EB0}	5	V
Collector current	I _C	50	mA
Collector power dissipation	2SC5659, 2SC4618H, 2SC4618	0.15	W
	2SC4098, 2SC2413K	0.2	
	2SC2058S	0.3	
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55~+150	°C

● Packaging specifications and h_{FE}

Type	2SC5659	2SC4618H	2SC4618	2SC4098	2SC2413K	2SC2058S
Package	VMT3	EMT3H	EMT3	UMT3	SMT3	SPT
HF	NPQ	NPQ	NPQ	NPQ	NPQ	P
Marking	A*	A*	A*	A*	A*	—
Code	T2L	T2L	TL	T106	T146	TP
Basic ordering unit (pieces)	8000	8000	3000	3000	3000	5000

* Denotes hFE

●External dimensions (Units : mm)

2SC5659		(1) Base (2) Emitter (3) Collector
2SC4618H		(1) Base (2) Emitter (3) Collector
ROHM : EMT3Flat lead EIAJ : SC-89	Each lead has same dimensions	
2SC4618		(1) Emitter(Source) (2) Base(Gate) (3) Collector(Drain)
ROHM : EMT3 EIAJ : SC-75A	Each lead has same dimensions	
2SC4098		(1) Emitter(Source) (2) Base(Gate) (3) Collector(Drain)
ROHM : UMT3 EIAJ : SC-70	Each lead has same dimensions	
2SC2413K		(1) Emitter(Source) (2) Base(Gate) (3) Collector(Drain)
ROHM : SMT3 EIAJ : SC-59	Each lead has same dimensions	
2SC5058S		(1) Emitter (2) Collector (3) Base
ROHM : SPT EIAJ : SC-72	Taping specifications	

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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 _E =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