High-Frequency Amplifier Transistor (11V, 50mA, 3.2GHz)

2SC5662 / 2SC4726 / 2SC4083 / 2SC3838K / 2SC4043S

●Features

1) High transition frequency. (Typ. f_T= 1.5GHz)
2) Small rbb'·Cc and high gain. (Typ. 4ps)
3) Small NF.

● Absolute maximum ratings (Ta = 25°C)

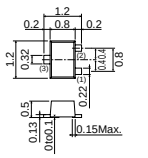
Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CBO}	20	V
Collector-emitter voltage		V_{CEO}	11	V
Emitter-base voltage		V_{EBO}	3	V
Collector current		I_C	50	mA
Collector power dissipation	2SC5662, 2SC4726	P_C	0.15	W
	2SC4083, 2SC3838K		0.2	
	2SC4043S		0.3	
Junction temperature		Tj	150	°C
Storage temperature		Tstg	−55~+150	°C

●Packaging specifications and h_{FE}

Type	2SC5662	2SC4726	2SC4083	2SC3838K	2SC4043S
Package	VMT3	EMT3	UMT3	SMT3	SPT
h_{FE}	NP	NP	NP	NP	P
Marking	AD	AD	1D	AD	–
Code	T2L	TL	T106	T146	TP
Basic ordering unit (pieces)	8000	3000	3000	3000	5000

●External dimensions (Units : mm)

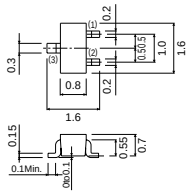
2SC5662



ROHM : VMT3

(1) Base
(2) Emitter
(3) Collector

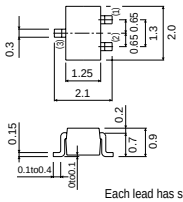
2SC4726



ROHM : EMT3
EIAJ : SC-75A

(1) Emitter
(2) Base
(3) Collector

2SC4083

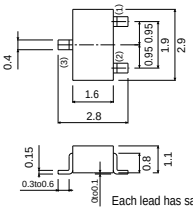


ROHM : UMT3
EIAJ : SC-70

(1) Emitter
(2) Base
(3) Collector

Each lead has same dimensions

2SC3838K

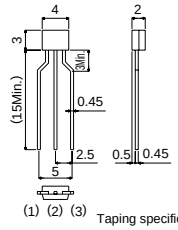


ROHM : SMT3
EIAJ : SC-59

(1) Emitter
(2) Base
(3) Collector

Each lead has same dimensions

2SC4043S



ROHM : SPT
EIAJ : SC-72

(1) Emitter
(2) Collector
(3) Base

Taping specifications

●Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage		BV_{CBO}	20	–	–	V	I_C = 10μA
Collector-emitter breakdown voltage		BV_{CEO}	11	–	–	V	I_C = 1mA
Emitter-base breakdown voltage		BV_{EBO}	3	–	–	V	I_E = 10μA
Collector cutoff current		I_{CBO}	–	–	0.5	μA	V_{CB} = 10V
Emitter cutoff current		I_{EBO}	–	–	0.5	μA	V_{EB} = 2V
Collector-emitter saturation voltage		$V_{CE(sat)}$	–	–	0.5	V	I_C/I_B = 10mA/5mA
DC current transfer ratio	2SC5662, 2SC4726, 2SC4083, 2SC3838K	h_{FE}	56	–	180	–	V_{CE}/I_C = 10V/5mA
	2SC4043S		82	–	180		
Transition frequency		f_T	1.4	3.2	–	GHz	V_{CE} = 10V , I_E = 10mA , f = 500MHz
Output capacitance		Cob	–	0.8	1.5	pF	V_{CB} = 10V , I_E = 0A , f = 1MHz
Collector-base time constant		$r_{bb'}$·Cc	–	4	12	ps	V_{CB} = 10V , I_C = 10mA , f = 31.8MHz
Noise factor		NF	–	3.5	–	dB	V_{CE} = 6V , I_C = 2mA , f = 500MHz , Rg = 50Ω