

**2SC5662 / 2SC4726 /
2SC4083 / 2SC3838K**

- 1) High transition frequency. (Typ. $f_T = 3.2\text{GHz}$)
- 2) Small $r_{bb'}$ -Cc and high gain. (Typ. 4ps)
- 3) Small NE.

Type	2SC5662	2SC4726	2SC4083	2SC3838K
Package	VMT3	EMT3	UMT3	SMT3
hFE	NP	NP	NP	NP
Marking	AD	AD	1D	AD
Code	T2L	TL	T106	T146
Basic ordering unit (pieces)	8000	3000	3000	3000

Parameter		Symbol	Limits	Unit
Collector-base voltage		V _{CEO}	20	V
Collector-emitter voltage		V _{CE0}	11	V
Emitter-base voltage		V _{EB0}	3	V
Collector current		I _c	50	mA
Collector power dissipation	2SC5662, 2SC4726	P _c	0.15	W
	2SC4083, 2SC3838K		0.2	
Junction temperature		T _j	150	°C
Storage temperature		T _{stg}	-55 to +150	°C

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

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage		BV_{CBO}	20	—	—	V	$I_C = 10\mu A$
Collector-emitter breakdown voltage		BV_{CEO}	11	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage		BV_{EBO}	3	—	—	V	$I_E = 10\mu A$
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	—	$V_{CE}/I_C = 10V/5mA$
Transition frequency		f_T	1.4	3.2	—	GHz	$V_{CE} = 10V, I_E = -10mA, f = 500MHz$
Output capacitance		C_{ob}	—	0.8	1.5	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$
Collector-base time constant		τ_{bb-CC}	—	4	12	ps	$V_{CB} = 10V, I_C = 10mA, f = 31.8MHz$
Noise factor		NF	—	3.5	—	dB	$V_{CE} = 6V, I_C = 2mA, f = 500MHz, R_g = 50\Omega$

●Electric characteristics curves

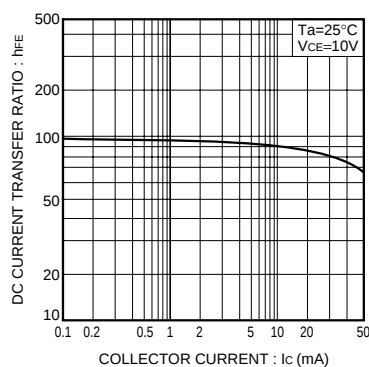


Fig.1 DC current gain vs. collector current

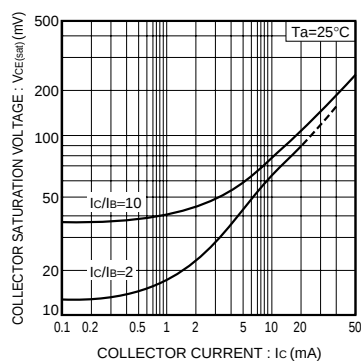


Fig.2 Collector-emitter saturation voltage vs. collector current

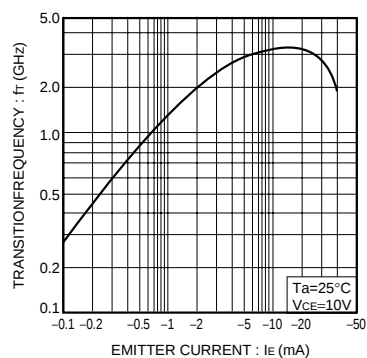


Fig.3 Gain bandwidth product vs. emitter current

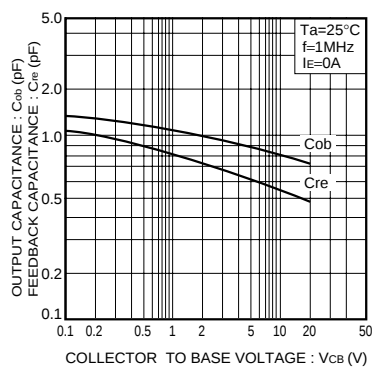


Fig.4 Capacitance vs. reverse bias voltage

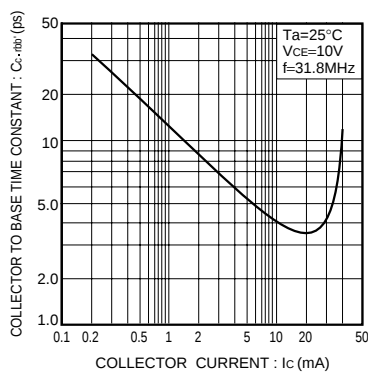


Fig.5 Collector to base time constant vs. collector current

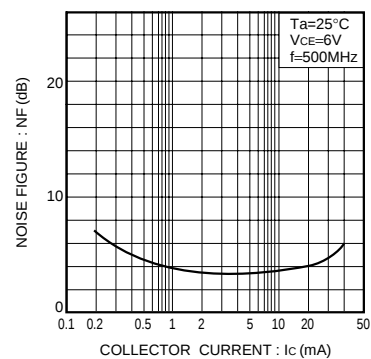


Fig.6 Noise factor vs. collector current characteristics

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