Low frequency transistor 2SA2018 / 2SA2030 / 2SA2119K

The transistor of 500mA class which went only into 2125 size conventionally was attained in 1608 sizes or 1208 sizes.

Applications

For switching, for muting.

Features

- 1) A collector current is large.
- 2) Collector saturation voltage is low.

 $V_{CE (sat)} \le 250 mA$

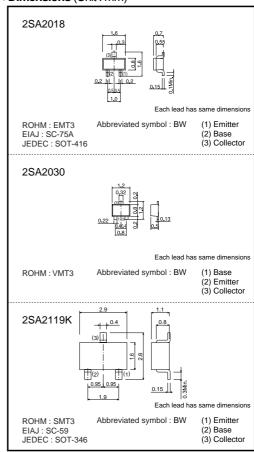
At $I_C = -200 \text{mA} / I_B = -10 \text{mA}$

● Absolute maximum ratings (Ta=25°C)

Parameter	Sy	mbol	Limits	Unit
Collector-base voltage	\	/сво	-15	V
Collector-emitter voltage	\	/ceo	-12	V
Emitter-base voltage	١	/ _{EBO}	-6	V
Collector current		lc	-500	mA
Collector current	Іср		-1	Α *
		VMT3	150	mW
Collector power dissipation	Pc	EMT3	150	
		SMT3	200	
Junction temperature	Tj		150	°C
Storage temperature	Tstg		-55 to +150	°C

^{*}Single pulse, Pw=1ms

●Dimensions (Unit : mm)



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	-15	_	_	V	Ic=-10μA
Collector-emitter breakdown voltage	BV _{CEO}	-12	_	_	V	I _C = -1mA
Emitter-base breakdown voltage	BV _{EBO}	-6	_	_	٧	I _E = -10μA
Collector cutoff current	Ісво	_	-	-100	nA	V _{CB} = -15V
Emitter cutoff current	ІЕВО	_	_	-100	nA	V _{EB} = -6V
DC current transfer ratio	h _{FE}	270	-	680	_	V _{CE} = -2V / I _C = -10mA
Collector-emitter saturation voltage	V _{CE} (sat)	_	-100	-250	mV	I _C = -200mA / I _B = -10mA
Transition frequency	f⊤	_	260	_	MHz	V _{CE} = −2V, I _E =10mA, f _T =100MHz
Output capacitance	Cob	_	6.5	_	pF	Vcb= -10V, Ie=0A, f=1MHz

●Packaging specifications and hFE

		Package name		Taping	
Type		Code	T146	TL	T2L
	h _{FE}	Basic ordering unit (pieces)	3000	3000	8000
2SA2119K			0	-	_
2SA2018			_	0	_
2SA2030			_	_	0

Electrical characteristic curves

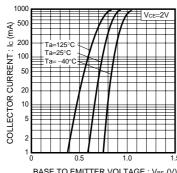
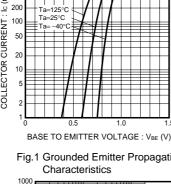


Fig.1 Grounded Emitter Propagation



= -40°

5 10 20

500

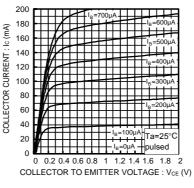


Fig.2 Typical Output Characteristics

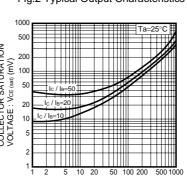


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current (I)

COLLECTOR CURRENT : Ic (mA)

50 100 200

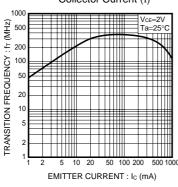


Fig.7 Gain Bandwidth Product vs. **Emitter Current**

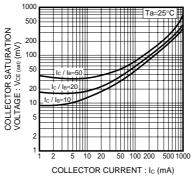


Fig.5 Collector-Emitter Saturation Voltage vs. Collector Current (II)

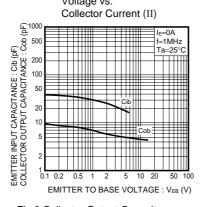


Fig.8 Collector Output Capacitance vs. Collector-Base Voltage Emitter Input Capacitance vs. Emitter-Base Voltage

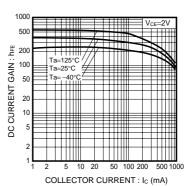


Fig.3 DC Current Gain vs. Collector Current

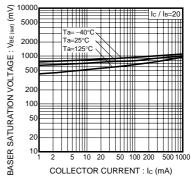


Fig.6 Base-Emitter Saturation Voltage vs.Collecter Current

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