

LOW FREQUENCY TRANSISTOR

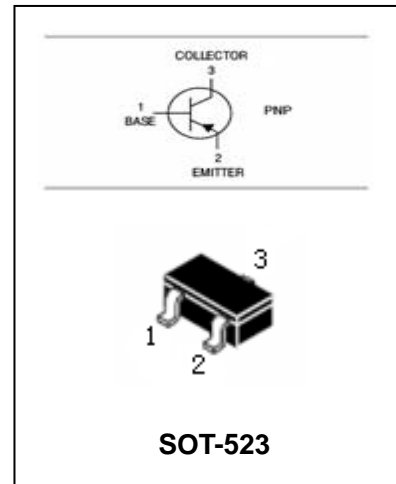
2SA2018

FEATURES

- A collector current is large.
- Collector saturation voltage is low.

$$V_{CE(sat)} \leq 250\text{mV}$$

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



APPLICATIONS

- For switching, for muting.

ORDERING INFORMATION

Type No.	Marking	Package Code
2SA2018	BW	SOT-523

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Limits	Unit
V _{CBO}	collector-base voltage	-15	V
V _{CEO}	collector-emitter voltage	-12	V
V _{EBO}	emitter-base voltage	-6	V
I _C	collector current	-500	mA
P _d	Collector power dissipation	150	mW
T _{stg}	storage temperature range	-55 to +150	°C
T _j	junction temperature	150	°C

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	Typ.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakown voltage	$I_C=-10\mu A, I_E=0$	-15			
$V_{(BR)CEO}$	Collector- emitter breakown voltage	$I_C=-1mA, I_B=0$	-12			
$V_{(BR)BEO}$	Emitter-base breakown voltage	$I_E=-10\mu A, I_C=0$	-6			
I_{CBO}	Collector cut-off current	$I_E=0, V_{CB}=-15V$			-100	nA
I_{EBO}	Emitter cut-off current	$I_C=0, V_{EB}=-6V$			-100	nA
h_{FE}	DC current gain	$V_{CE}=-2V, I_C=-10mA$	270		680	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C=-50mA, I_B=-5mA$		-100	-250	mV
C_{obo}	Output capacitance	$I_E=0, V_{CB}=-10V, f=1MHz$		6.5		pF
f_T	transition frequency	$I_E=10A, V_{CE}=-2V,$ $f=100MHz$		260		MHz

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

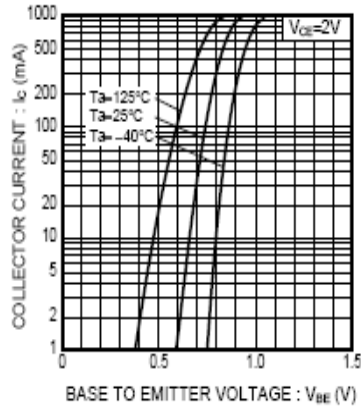


Fig.1 Grounded Emitter Propagation Characteristics

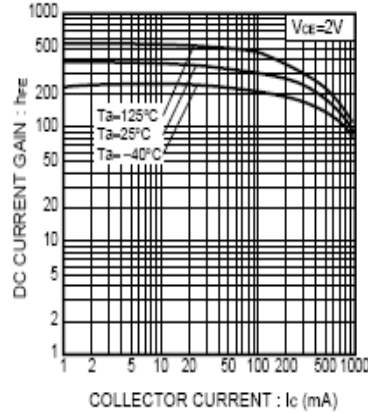


Fig.2 DC Current Gain vs. Collector Current

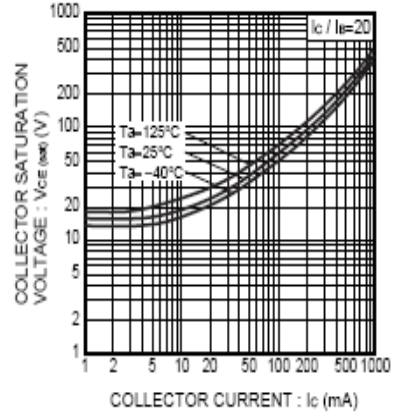


Fig.3 Collector-Emitter Saturation Voltage vs. Collector Current (I)

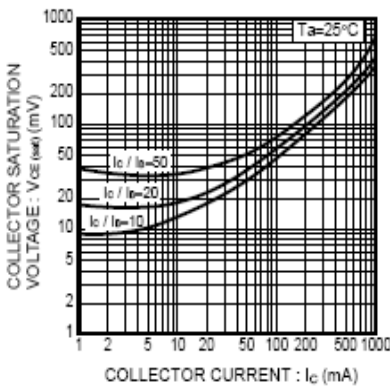


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current (II)

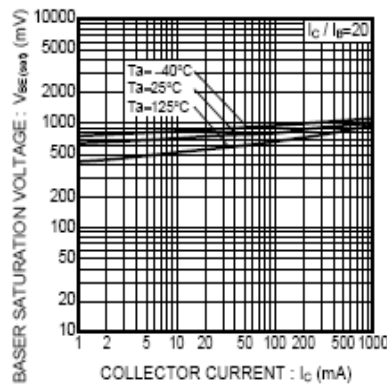


Fig.5 Base-Emitter Saturation Voltage vs. Collector Current

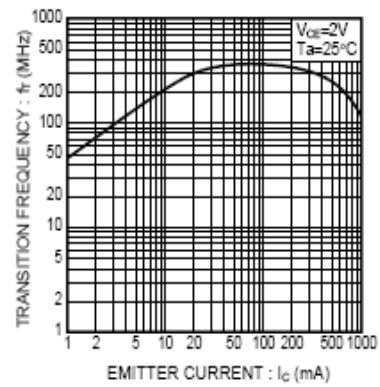


Fig.6 Gain Bandwidth Product vs. Emitter Current

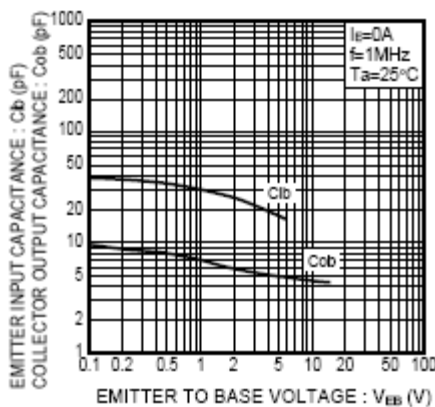


Fig.7 Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage

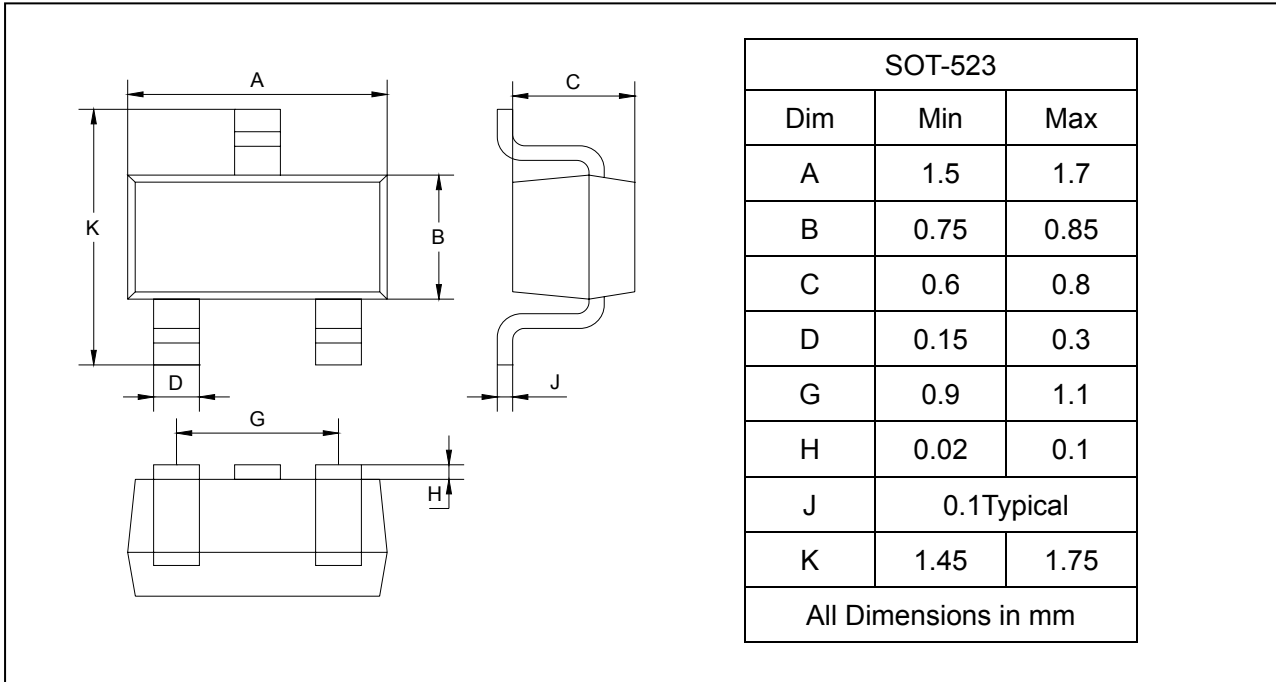
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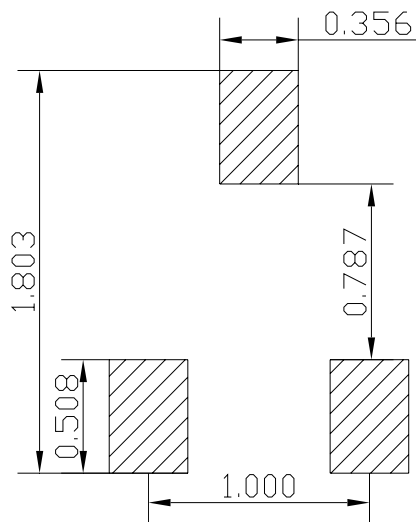
PACKAGE OUTLINE

Plastic surface mounted package

SOT-523



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
2SA2018	SOT-523	3000/Tape&Reel

www.s-manuals.com