LOW FREQUENCY TRANSISTOR 2SA2018

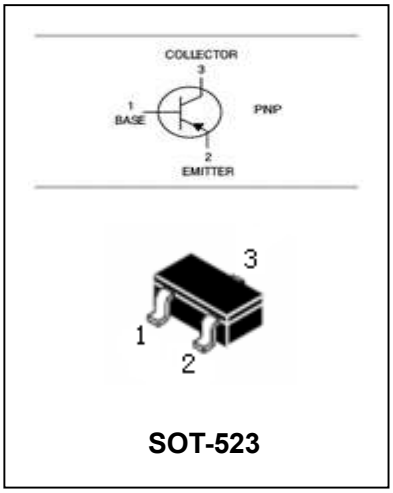
FEATURES

- A collceter current is large.
- Collecter saturation voltage is low.

  $V_{CE(sat)} \leqslant 250mV$

  At I_C=-200mA/I_B=-10mA

Lead-free



SOT-523

APPLICATIONS

- For switching,for muting.

ORDERING INFORMATION

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

MAXIMUM RATING @ Ta=25℃ 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

LOW FREQUENCY TRANSISTOR 2SA2018

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	Typ.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakown voltage	I_C=-10μA,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=-10μA,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

LOW FREQUENCY TRANSISTOR 2SA2018

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

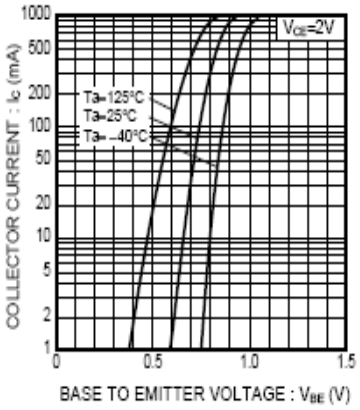


Fig.1 Grounded Emitter Propagation Characteristics

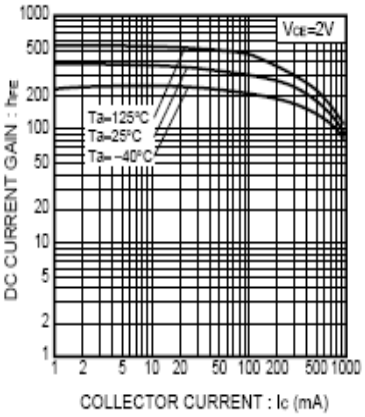


Fig.2 DC Current Gain vs. Collector Current

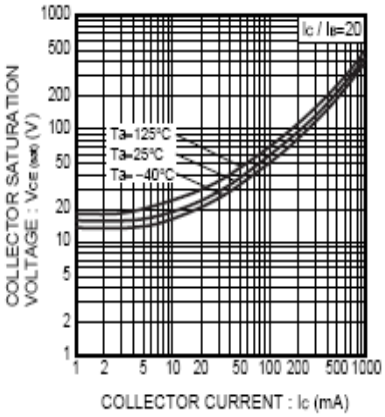


Fig.3 Collector-Emitter Saturation Voltage vs. Collector Current (I)

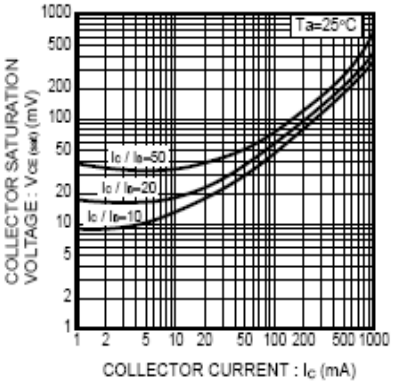


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current (II)

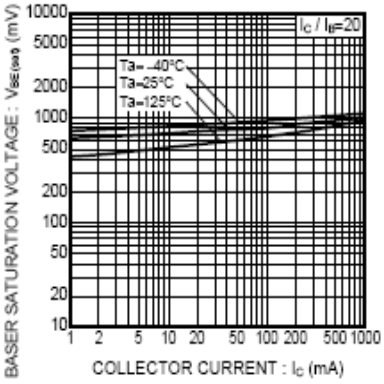


Fig.5 Base-Emitter Saturation Voltage vs.Collecter Current

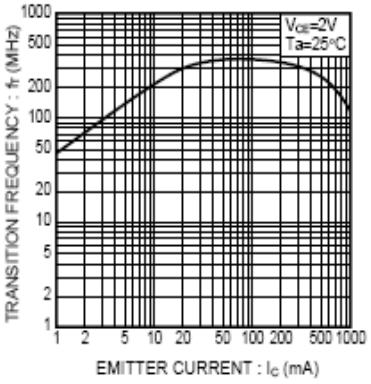


Fig.6 Gain Bandwidth Product vs. Emitter Current

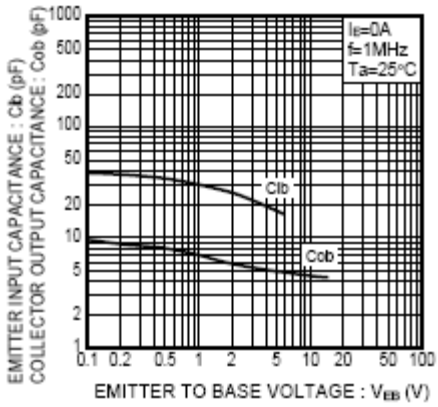
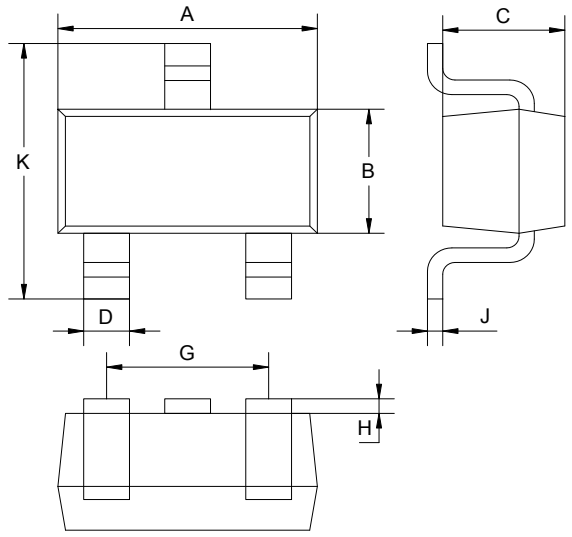


Fig.7 Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage

LOW FREQUENCY TRANSISTOR 2SA2018

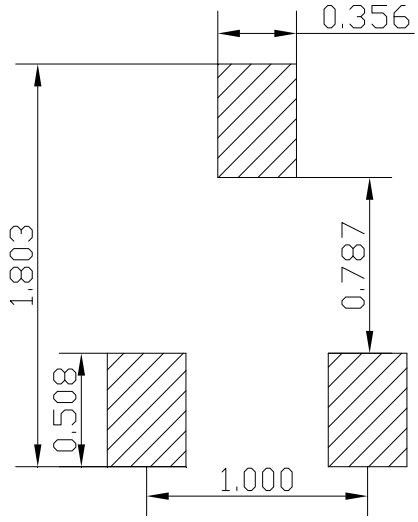
PACKAGE OUTLINE

Plastic surface mounted package SOT-523



SOT-523		
Dim	Min	Max
A	1.5	1.7
B	0.75	0.85
C	0.6	0.8
D	0.15	0.3
G	0.9	1.1
H	0.02	0.1
J	0.1Typical	
K	1.45	1.75
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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