



Silicon Epitaxial Planar Transistor

2SC4118

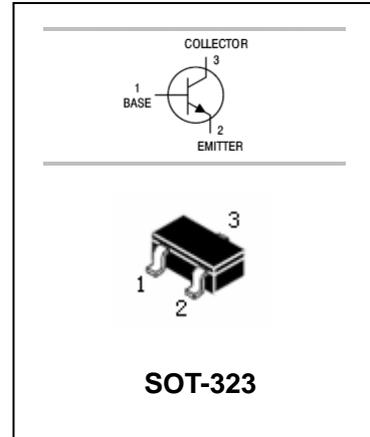
FEATURES

- Excellent h_{FE} linearity.
- Complementary to 2SA1588.



APPLICATIONS

- NPN Silicon Epitaxial Planar Transistor.
- Switching and amplification.



ORDERING INFORMATION

Type No.	Marking	Package Code
2SC4118	WO/WY	SOT-323

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	35	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	500	mA
P_C	Collector Dissipation	100	mW
T_{stg}	Storage Temperature	-55 to +125	$^\circ\text{C}$
T_j	Junction Temperature	125	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu A, I_E=0$	35	-	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	30	-	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu A, I_C=0$	5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=35V, I_E=0$	-	-	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=100mA$	70	-	240	
	$h_{FE(2)}$	$V_{CE}=6V, I_C=400mA$	25	-	-	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_{CE}=100mA, I_B=10mA$	-	0.1	0.25	V
Base-Emitter Voltage	V_{BE}	$V_{CE}=1V, I_C=100mA$	-	0.8	1.0	V
Transition frequency	f_T	$V_{CE}=6V, I_C=20mA$	-	300	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=6V, I_E=0, f=1MHz$	-	7	-	pF

CLASSIFICATION OF $h_{FE(1)}$

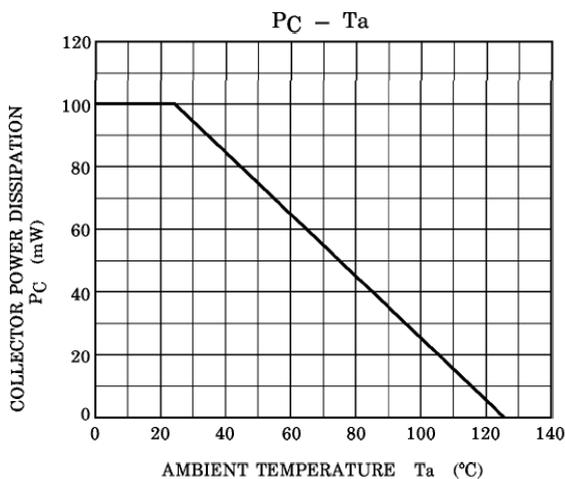
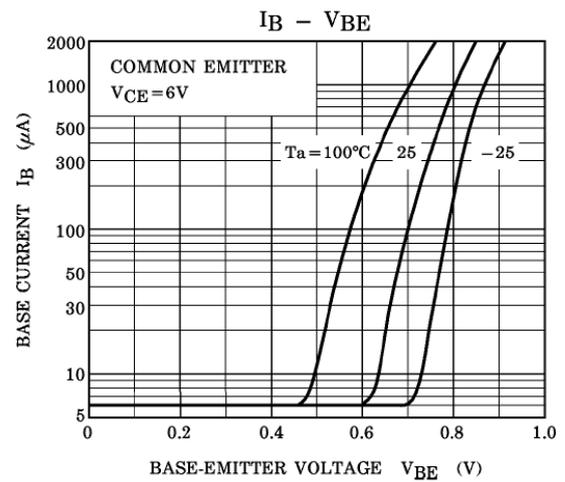
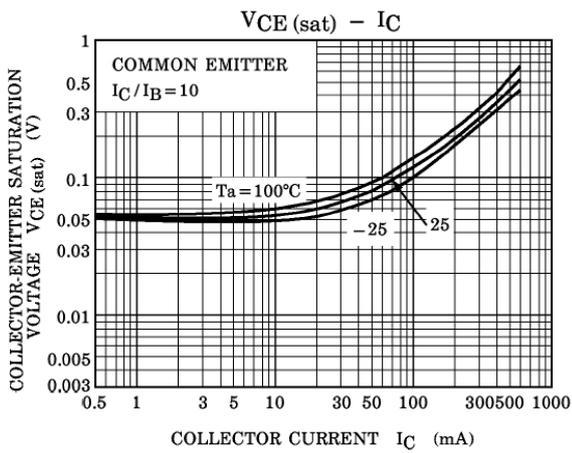
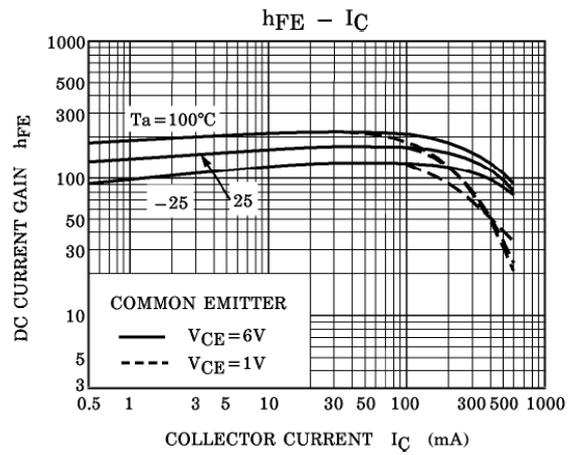
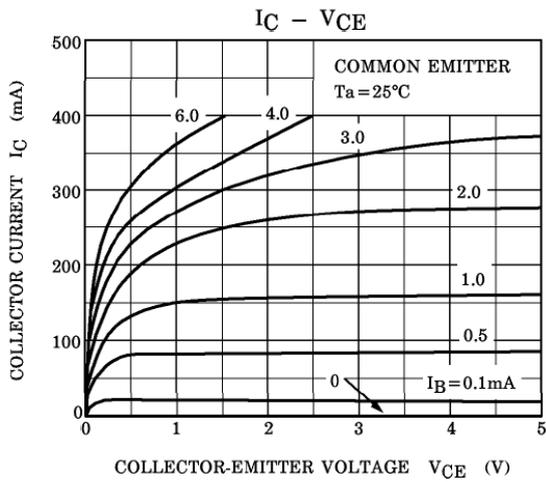
Range	O	Y
Range	70-140	120-240
Marking	WO	WY



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



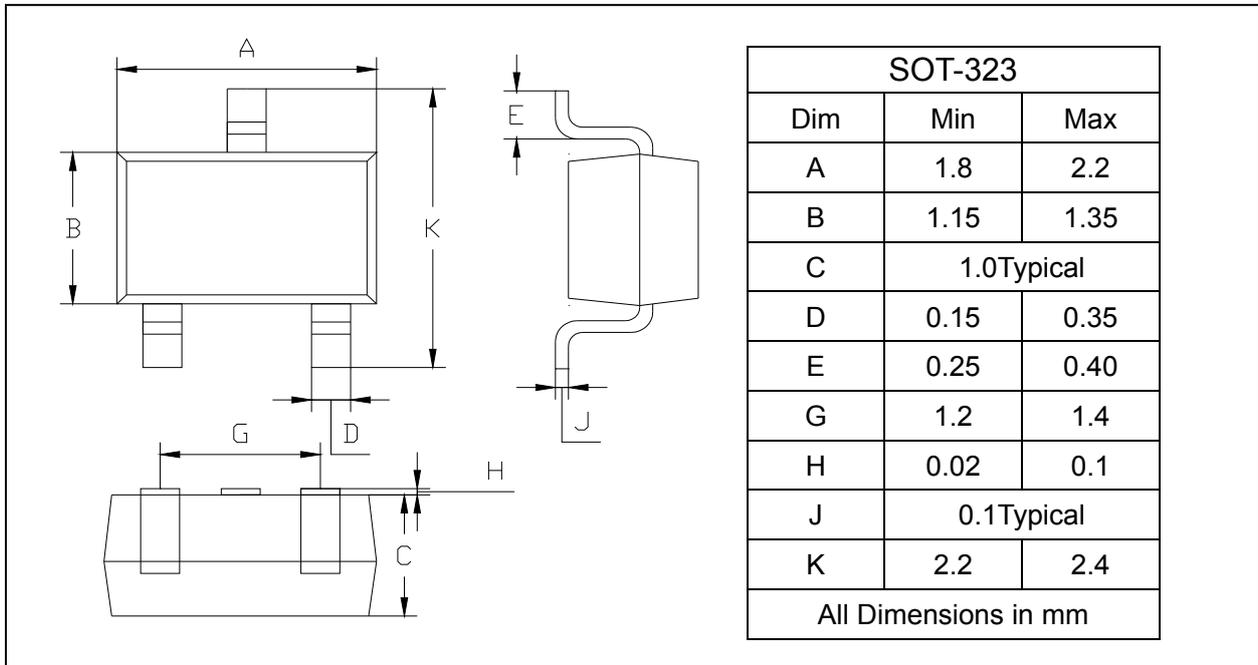
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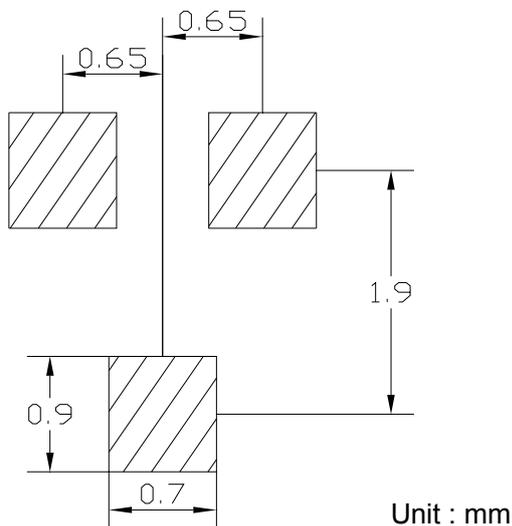
PACKAGE OUTLINE

Plastic surface mounted package

SOT-323



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SC4118	SOT-323	3000/Tape&Reel