

Silicon Epitaxial Planar Transistor

2SD601A

FEATURES

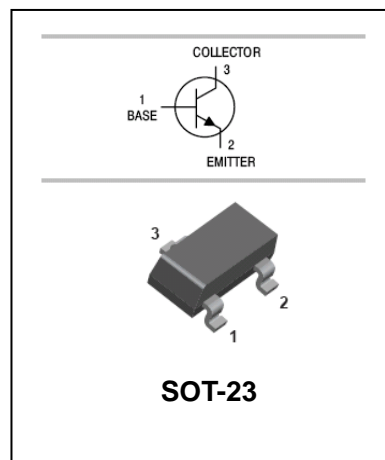
- Mini type package.
- Complementary to 2SB709A PNP Transistor.
- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- High forward current transfer ratio h_{FE} .



Lead-free

APPLICATIONS

- General purpose amplifier applications.



ORDERING INFORMATION

Type No.	Marking	Package Code
2SD601A	ZQ/ZR/ZS	SOT-23

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	100	mA
P_C	Collector power Dissipation	200	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=2mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	7			V
Collector cut-off current	I_{CBO}	$V_{CB}=20V, I_E=0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=10V, I_C=0$			100	μA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=2mA$ $V_{CE}=2V, I_C=100mA$	160 90		460	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$		0.1	0.3	V
Transition frequency	f_T	$V_{CB}=10V, I_E=-2mA,$ $f=200MHz$		150		MHz
Output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			3.5	pF

CLASSIFICATION OF $h_{FE(1)}$

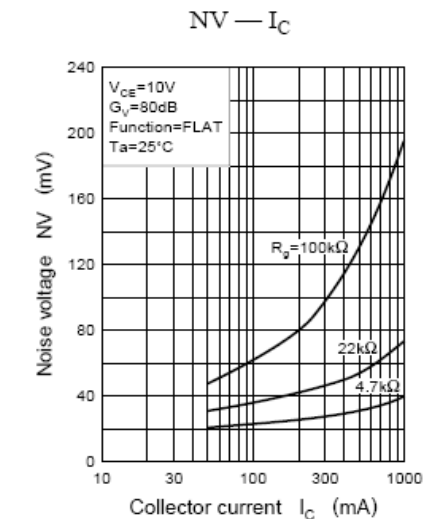
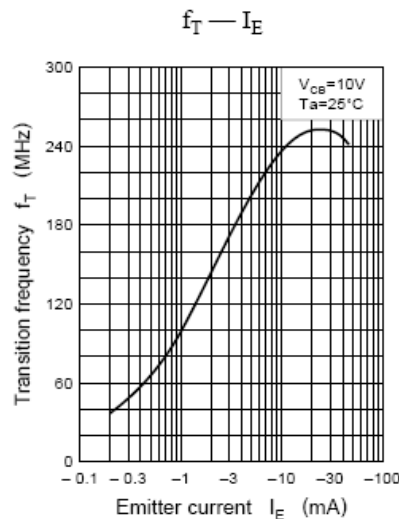
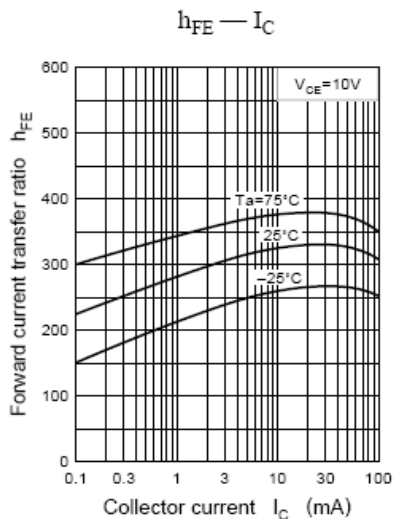
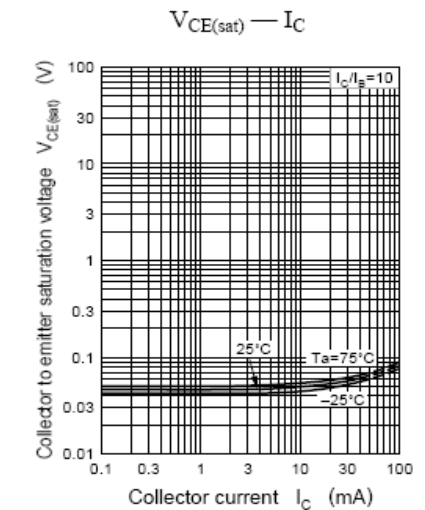
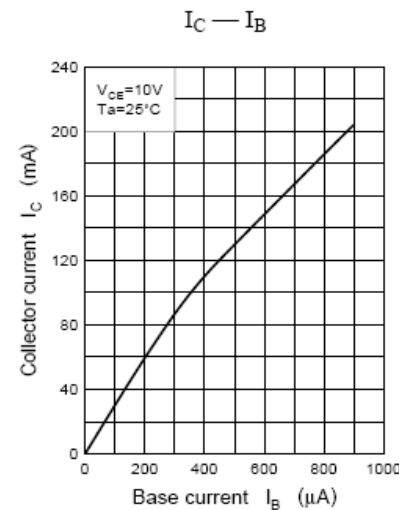
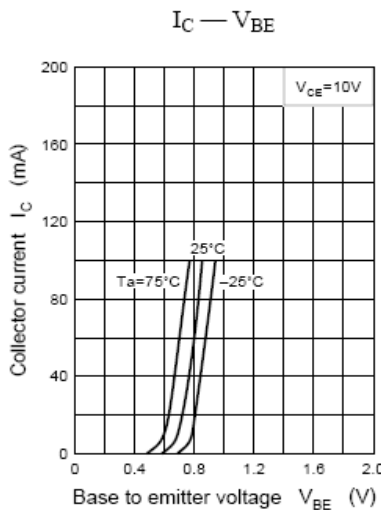
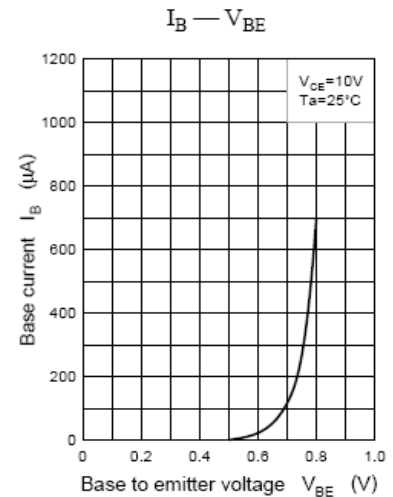
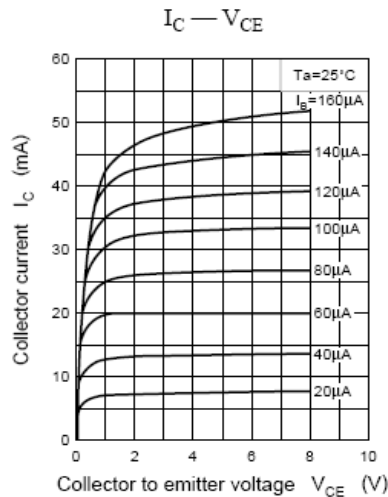
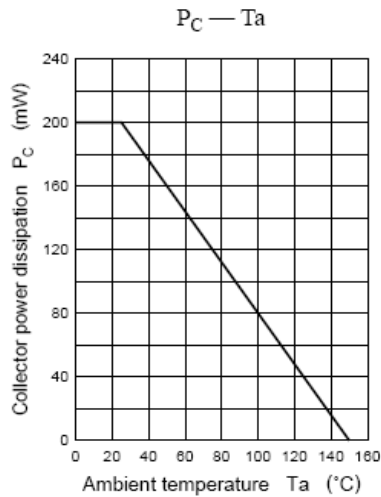
Rank	Q	R	S
h_{FE1}	160-260	210-340	290-460
Marking	ZQ	ZR	ZS



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TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified





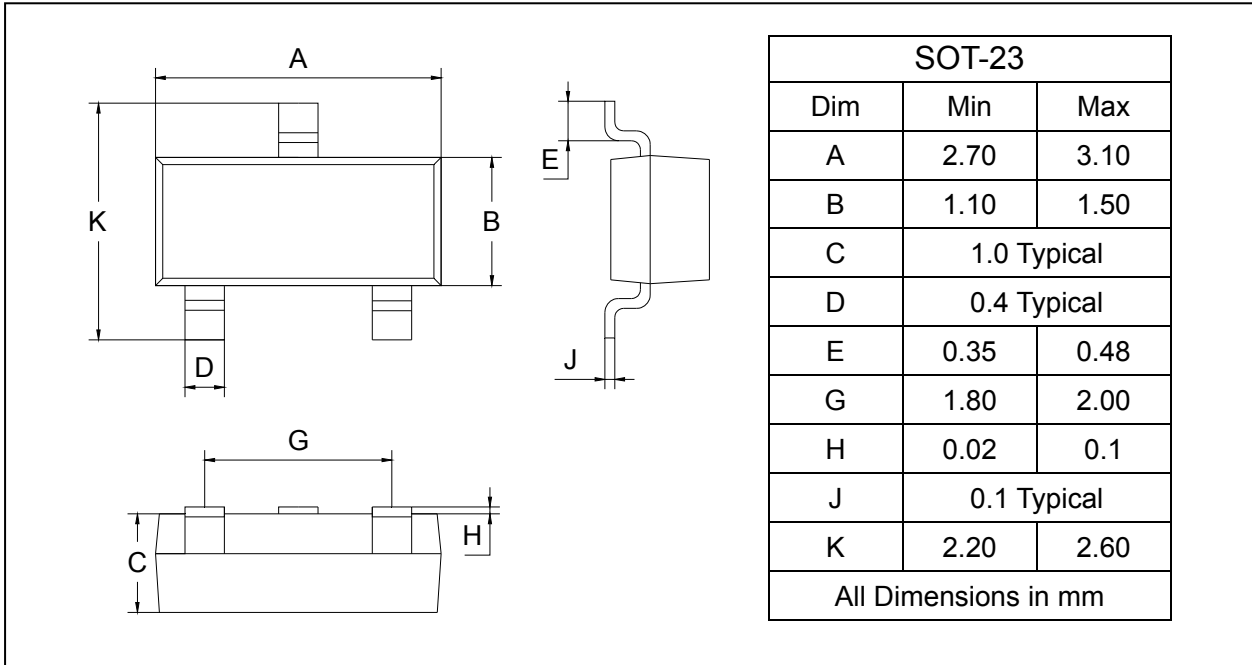
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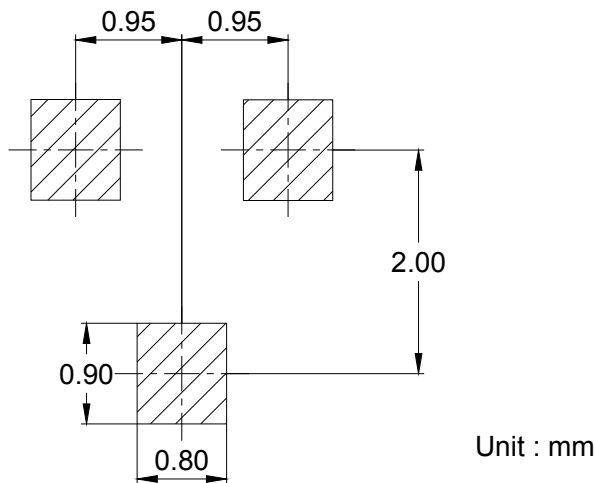
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SD601A	SOT-23	3000/Tape&Reel