



**NPN Silicon Epitaxial Planar Transistor**

**KTC3880S**

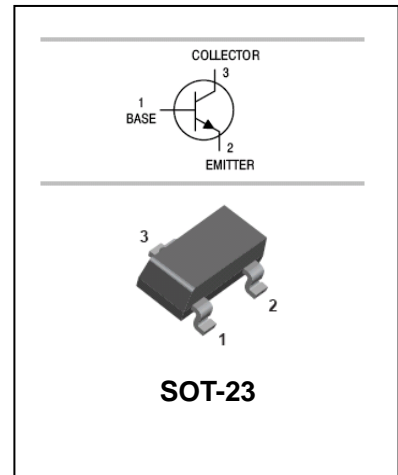
**FEATURES**

- Small reverse transfer capacitance.
- Low noise figure.



**APPLICATIONS**

- High frequency Low noise amplifier application.
- VHF band amplifier application.



**ORDERING INFORMATION**

Type No.	Marking	Package Code
KTC3880S	AQR/AQO/AQY	SOT-23

**MAXIMUM RATING @ Ta=25°C unless otherwise specified**

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Base Voltage	40	V
V <sub>CEO</sub>	Collector-Emitter Voltage	30	V
V <sub>EBO</sub>	Emitter-Base Voltage	4	V
I <sub>C</sub>	Collector Current	20	mA
I <sub>E</sub>	Emitter Current	-20	mA
P <sub>C</sub>	Collector Power Dissipation	150	mW
T <sub>J</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-55 to +150	°C



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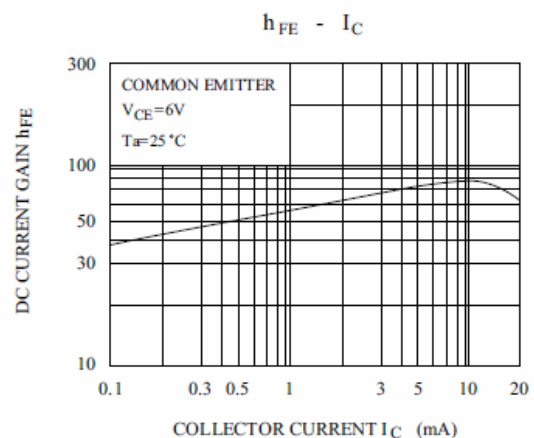
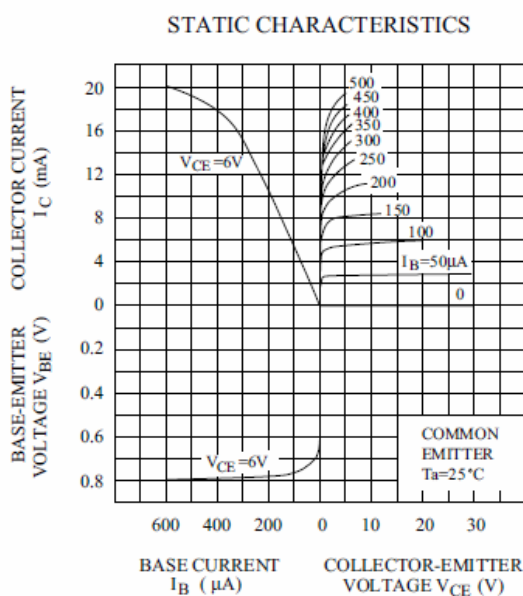
**ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector cut-off current	$I_{CBO}$	$V_{CB}=18V, I_E=0$			0.5	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			0.5	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=6V, I_C=1mA$	40		200	
Transition frequency	$f_T$	$V_{CE}=6V, I_C=1mA$	300	550		MHz
Reverse Transfer Capacitance	$C_{re}$	$V_{CB}=6V, I_E=0, f=1MHz$		0.7		pF
Collector-Base Time Constant	$C_{C-rbb}$	$V_{CB}=6V, I_E=-1mA$ $f=30MHz$			30	pS
Noise figure	NF	$V_{CC}=6V, I_E=-1mA,$ $f=100KHz$		2.5	5.0	dB
Power Gain	$G_{pe}$		15	18		

**CLASSIFICATION OF  $h_{FE}$**

Rank	R	O	Y
Range	40-80	70-140	100-200
Marking	AQR	AQO	AQY

**TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**



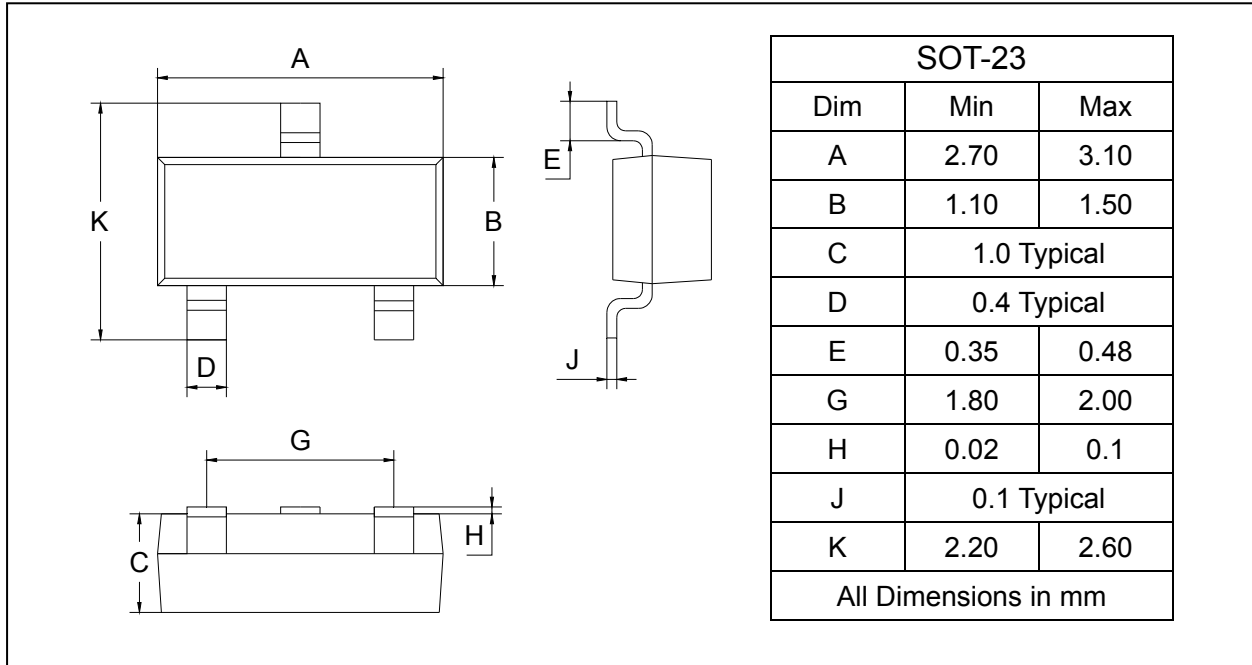
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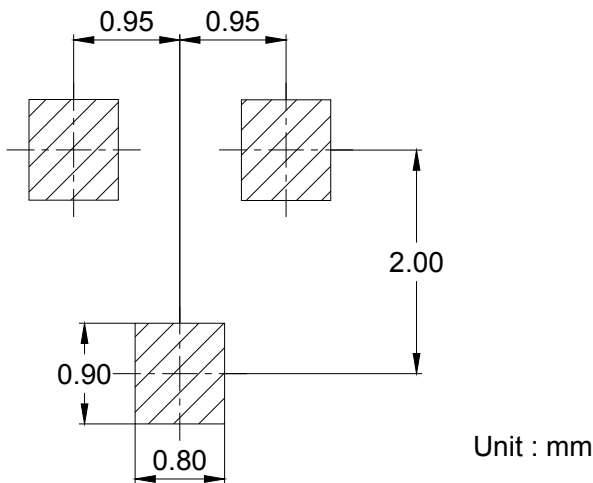
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-23



**SOLDERING FOOTPRINT**



**PACKAGE INFORMATION**

Device	Package	Shipping
KTC3880S	SOT-23	3000/Tape&Reel