

NPN Silicon Epitaxial Planar Transistor

TKTC3880S

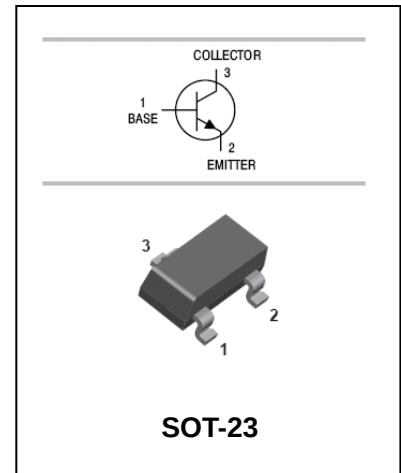
FEATURES

- Small reverse transfer capacitance
- Low noise figure
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF

APPLICATIONS

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



ORDERING INFORMATION

Type No.	Marking	Package Code
TKTC3880S	AQR/AQO/AQY	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current	20	mA
I_E	Emitter Current	-20	mA
P_C	Collector Power Dissipation	150	mW
T_J, T_{STG}	Junction and Storage Temperature	-55 to +150	°C

NPN Silicon Epitaxial Planar Transistor

TKTC3880S

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	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.5	μA
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		

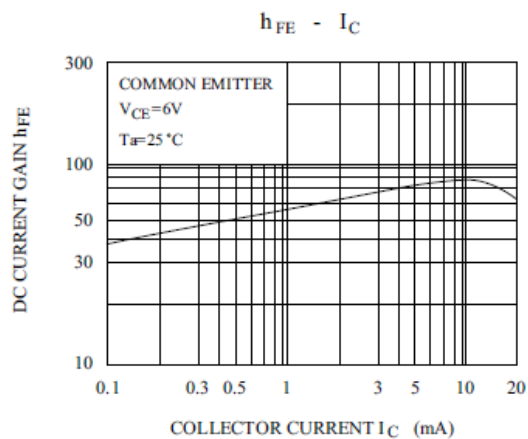
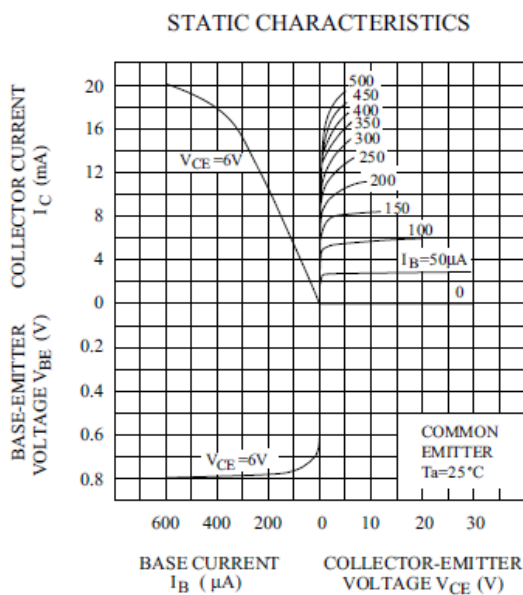
CLASSIFICATION OF h_{FE}

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

NPN Silicon Epitaxial Planar Transistor

TKTC3880S

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



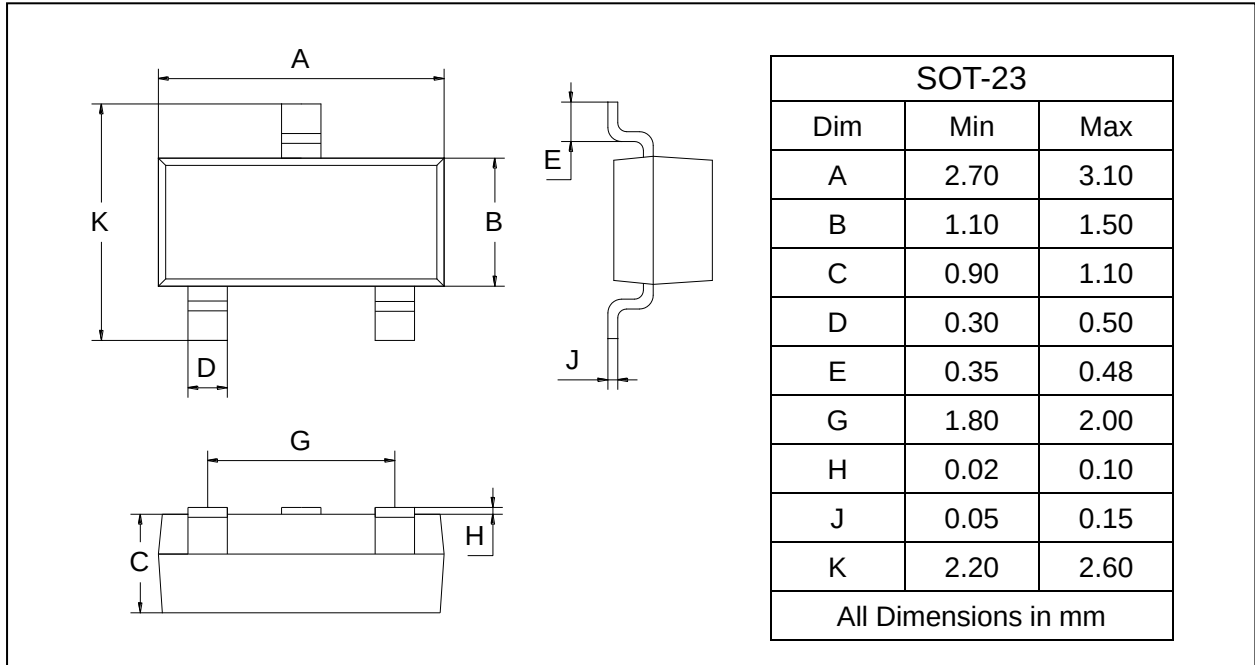
NPN Silicon Epitaxial Planar Transistor

TKTC3880S

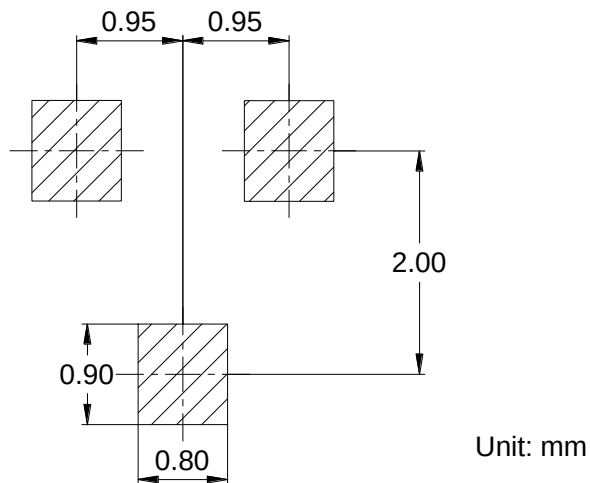
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
TKTC3880S	SOT-23	3000pcs / Tape & Reel