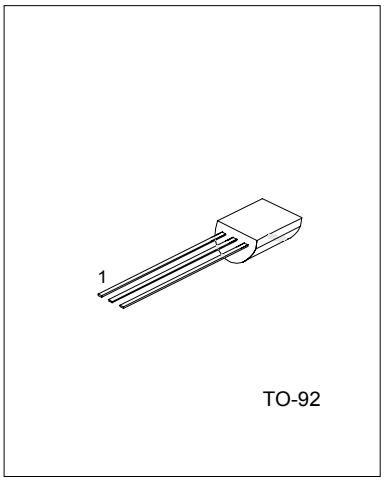
UTC 2N5551 NPN EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE SWITCHING TRANSISTOR



TO-92

1:EMITTER 2:BASE 3:COLLECTOR

FEATURES

* High Collector-Emitter Voltage:
  V_{CEO}=160V
*High current gain

APPLICATIONS

*Telephone switching circuit
*Amplifier

ABSOLUTE MAXIMUM RATINGS (Ta=25°C ,unless otherwise specified)

PARAMETERS	SYMBOL	RATING	UNIT
Collector-base voltage	V_{CBO}	180	V
Collector-emitter voltage	V_{CEO}	160	V
Emitter-base voltage	V_{EBO}	6	V
Collector dissipation	Pc	625	mW
Collector current	Ic	600	mA
Junction Temperature	T_j	150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS(Ta=25°C,unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV_{CBO}	I_C=100μA,I_E=0	180			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C=1mA,I_B=0	160			V
Emitter-base breakdown voltage	BV_{EBO}	I_E=10μA,I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=120V,I_E=0			50	nA
Emitter cut-off current	I_{EBO}	V_{BE}=4V,I_C=0			50	nA
DC current gain(note)	h_{FE}	V_{CE}=5V,I_C=1mA V_{CE}=5V,I_C=10mA V_{CE}=5V,I_C=50mA	80 80 80	 160	 400	
Collector-emitter saturation voltage	V_{CE}(sat)	I_C=10mA,I_B=1mA I_C=50mA,I_B=5mA			0.15 0.2	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C=10mA,I_B=1mA I_C=50mA,I_B=5mA			1 1	V
Current gain bandwidth product	f_T	V_{CE}=10V,I_C=10mA,f=100MHz	100		300	MHz

(continued)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output capacitance	Cob	V_{CB}=10V,I_E=0 f=1MHz			6.0	pF
Noise Figure	NF	Ic=0.25mA,V_{CE}=5V Rs=1kΩ,f=10Hz to 15.7kHz			8	dB

Note:Pulse test:PW<300μs,Duty Cycle<2%

CLASSIFICATION OF hFE

RANK	A	B	C
RANGE	80-170	150-240	200-400

TYPICAL CHARACTERISTIC CURVES

Fig.1 Collector output Capacitance

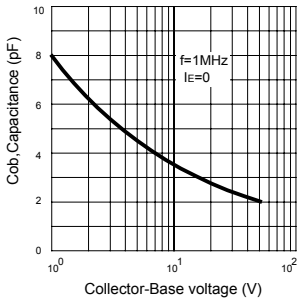


Fig.2 DC current Gain

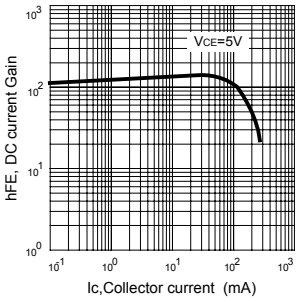


Fig.3 Base-Emitter on Voltage

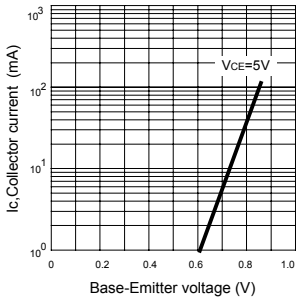


Fig.4 Saturation voltage

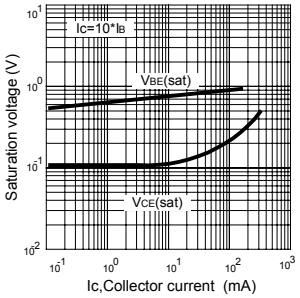


Fig.5 Current gain-bandwidth product