

HIGH VOLTAGE SWITCHING
TRANSISTOR

FEATURES

*Collector-Emitter Voltage:

 $V_{CE0} = -150V$

*Collector Dissipation:

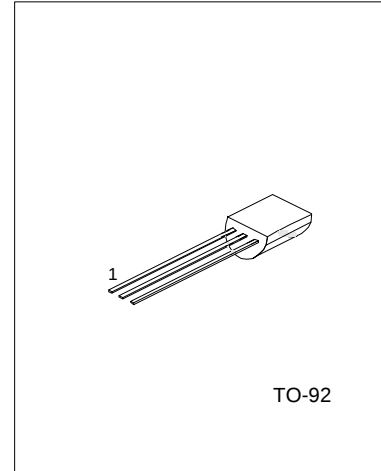
 $P_c(\max) = 625mW$

*High current gain

APPLICATIONS

*Telephone Switching Circuit

*Amplifier



1:EMITTER 2:BASE 3:COLLECTOR

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ C$, unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V_{CB0}	-160	V
Collector-emitter voltage	V_{CE0}	-150	V
Emitter-base voltage	V_{EB0}	-5	V
Collector dissipation	P_c	625	mW
Collector current	I_c	-600	mA
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV_{CB0}	$I_c = -100\mu A, I_E = 0$	-160			V
Collector-emitter breakdown voltage	BV_{CE0}	$I_c = -1mA, I_B = 0$	-150			V
Emitter-base breakdown voltage	BV_{EB0}	$I_E = -10\mu A, I_c = 0$	-6			V
Collector cut-off current	I_{CB0}	$V_{CB} = -120V, I_E = 0$			-50	nA
Emitter cut-off current	I_{EB0}	$V_{EB} = -3V, I_c = 0$			-50	nA
DC current gain(note)	hFE1	$V_{CE} = -5V, I_c = -1mA$	80			
	hFE2	$V_{CE} = -5V, I_c = -10mA$	80		400	
	hFE3	$V_{CE} = -5V, I_c = -50mA$	80			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = -10mA, I_B = -1mA$			-0.2	V
		$I_c = -50mA, I_B = -5mA$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_c = -10mA, I_B = -1mA$			-1	V
		$I_c = -50mA, I_B = -5mA$			-1	V
Current gain bandwidth product	f _T	$V_{CE} = -10V, I_c = -10mA, f = 100MHz$	100		400	MHz

UTC 2N5401

PNP EPITAXIAL SILICON TRANSISTOR

(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	I _C =-0.25mA,V _{CE} =-5V R _s =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 PARAMETERS PERFORMANCE

