

UTC2SD965/A NPN EPITAXIAL SILICON TRANSISTOR

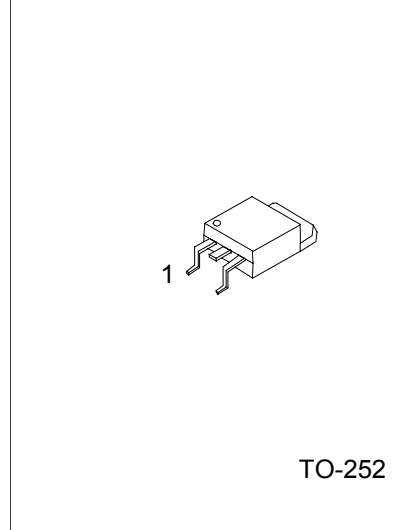
LOW VOLTAGE HIGH CURRENT NPN TRANSISTOR

FEATURES

- * Collector current up to 5A
- * 2SD965 : Collector-Emitter voltage up to 20 V
- * 2SD965A : Collector-Emitter voltage up to 30 V

APPLICATIONS

- * Audio amplifier
- * Flash unit of camera
- * Switching circuit



1: BASE 2: COLLECTOR 3: EMITTER

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	V _{CB0}	40	V
Collector-emitter voltage	V _{CEO}		V
2SD965		20	
2SD965A		30	
Emitter-base voltage	V _{EB0}	7	V
Collector power dissipation	P _c	1	W
Collector current	I _c	5	A
Junction Temperature	T _j	150	°C
Storage Temperature	T _{STG}	-65 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV _{CB0}	I _c =100μA, I _E =0	40			V
Collector-emitter breakdown voltage	BV _{CEO}	I _c =1mA, I _B =0				V
2SD965			20			
2SD965A			30			
Emitter-base breakdown voltage	BV _{EB0}	I _E =10μA, I _c =0	7			V
Collector cut-off current	I _{CBO}	V _{CB} =10V, I _E =0			100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =7V, I _c =0			100	nA
DC current gain(note)	h _{FE}	V _{CE} =2V, I _c =1mA V _{CE} =2V, I _c =0.5A V _{CE} =2V, I _c =2A	230 150	200	800	
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =3A, I _B = 0.1A			1	V

UTC UNISONIC TECHNOLOGIES CO. LTD

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QW-R209-007,A

UTC2SD965/A NPN EPITAXIAL SILICON TRANSISTOR

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Current gain bandwidth product	f_T	$V_{CE}=6V, I_C=50mA$		150		MHz
Output capacitance	C_{ob}	$V_{CB}=20V, I_E=0$ $f=1MHz$			50	pF

CLASSIFICATION OF h_{FE}

RANK	Q	R	S
RANGE	230-380	340-600	560-800

TYPICAL CHARACTERISTIC CURVES

Fig.1 Static characteristics

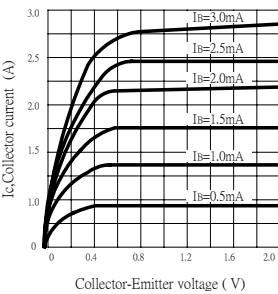


Fig.2 DC current Gain

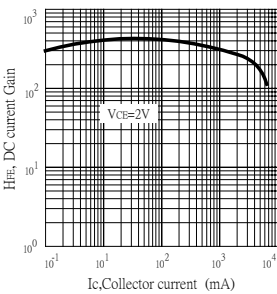


Fig.3 Base-Emitter on Voltage

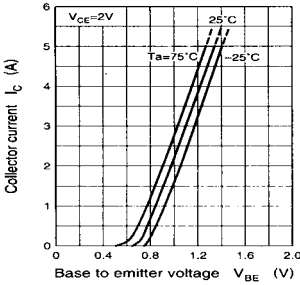


Fig.4 Saturation voltage

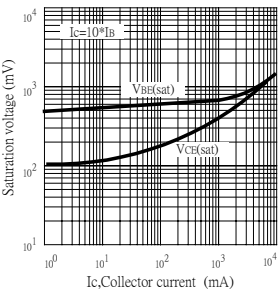


Fig.5 Current gain-bandwidth product

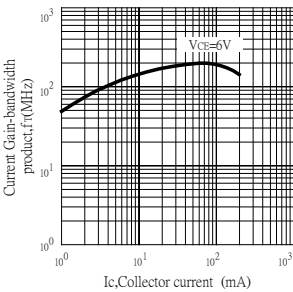


Fig.6 Collector output Capacitance

