

UTC2SD965/A NPN EPITAXIAL SILICON TRANSISTOR

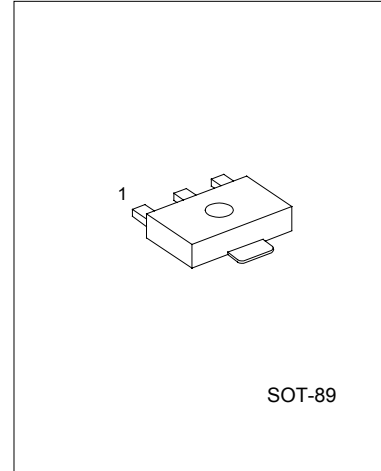
LOW VOLTAGE HIGH CURRENT NPN TRANSISTOR

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



SOT-89

1:EMITTER 2:COLLECTOR 3: BASE

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATING	UNIT
Collector-base voltage	VCBO	40	V
Collector-emitter voltage	VCEO		V
2SD965		20	
2SD965A		30	
Emitter-base voltage	VEBO	7	V
Collector dissipation(Ta=25°C)	Pc	750	mW
Collector current	Ic	5	A
Junction Temperature	Tj	150	°C
Storage Temperature	TSTG	-65 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BVCBO	Ic=100μA,IE=0	40			V
Collector-emitter breakdown voltage	BVCEO	Ic=1mA,IB=0				V
2SD965			20			
2SD965A			30			
Emitter-base breakdown voltage	BVEBO	IE=10μA,Ic=0	7			V
Collector cut-off current	ICBO	VCB=10V,IE=0			100	nA
Emitter cut-off current	IEBO	VEB=7V,Ic=0			100	nA
DC current gain(note)	hFE	VCE=2V,Ic=1mA VCE=2V,Ic=0.5A VCE=2V,Ic=2A	230 150	200	800	
Collector-emitter saturation voltage	VCE(sat)	Ic=3A, IB= 0.1A			1	V
Current gain bandwidth product	fT	VCE=6V,Ic=50mA		150		MHz

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output capacitance	Cob	V _{CB} =20V, I _E =0 f=1MHz			50	pF

CLASSIFICATION OF hFE2

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

TYPICAL CHARACTERISTIC CURVES

Fig.1 Static characteristics

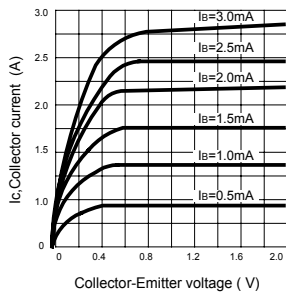


Fig.2 DC current Gain

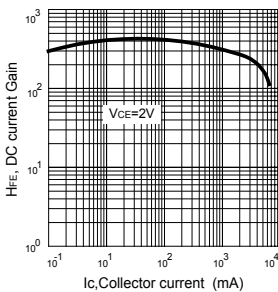


Fig.3 Base-Emitter on Voltage

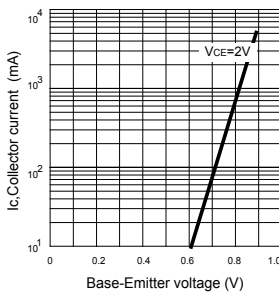


Fig.4 Saturation voltage

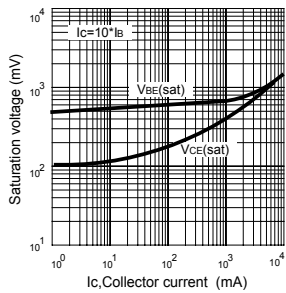


Fig.5 Current gain-bandwidth product

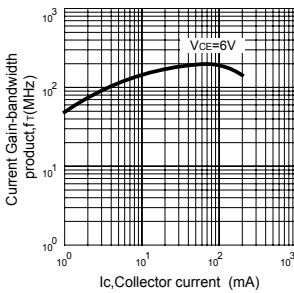


Fig.6 Collector output Capacitance

