



D965SS / D965ASS

NPN EPITAXIAL SILICON TRANSISTOR

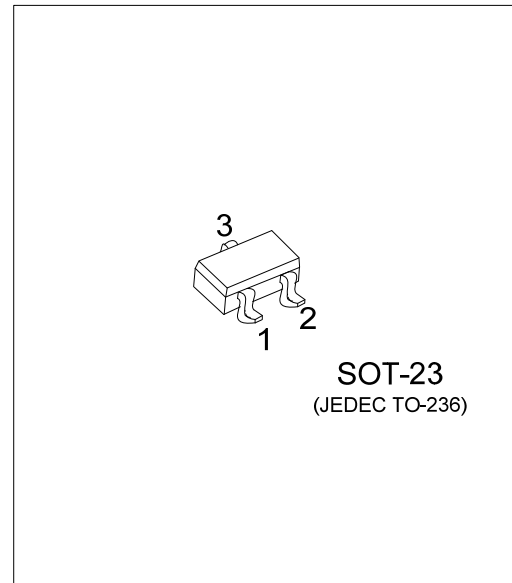
LOW VOLTAGE HIGH CURRENT NPN TRANSISTOR

■ **FEATURES**

- * Collector current up to 5A
- * D965SS : Collector-Emitter voltage up to 20 V
- * D965ASS : Collector-Emitter voltage up to 30 V

■ **APPLICATIONS**

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



■ **ORDERING INFORMATION**

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
D965SSL-x-AE3-R	D965SSG-x-AE3-R	SOT-23	B	E	C	Tape Reel
D965ASSL-x-AE3-R	D965ASSG-x-AE3-R	SOT-23	B	E	C	Tape Reel

Note: Pin assignment: B: Base E: Emitter C: Collector

<p>D965SSG-x-AE3-R</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23 (3) x: refer to Classification of h_{FE2} (4) G: Halogen Free and Lead Free, L: Lead Free</p>
------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

■ **MARKING**

D965SS	D965ASS

■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base voltage	V_{CBO}	40	V
Collector-Emitter Voltage	D965SS	20	V
	D965ASS	30	
Emitter-Base Voltage	V_{EBO}	7	V
Collector dissipation($T_a=25^{\circ}C$)	P_c	750	mW
Collector current	I_c	5	A
Junction Temperature	T_J	+150	$^{\circ}C$
Storage Temperature	T_{STG}	-65 ~ +150	$^{\circ}C$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}C$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BV_{CBO}	$I_C=100\mu A, I_E=0$	40			V
Collector-emitter breakdown voltage	D965SS	$I_C=1mA, I_B=0$	20			V
	D965ASS		30			V
Emitter-base breakdown voltage	BV_{EBO}	$I_C=0, I_E=10\mu A$	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	h_{FE1}	$V_{CE}=2V, I_C=1mA$		200		
	h_{FE2}	$V_{CE}=2V, I_C=0.5A$	230		800	
	h_{FE3}	$V_{CE}=2V, I_C=2A$	150			
Collector-emitter saturation voltage	$V_{CE(SAT)}$	$I_C=3A, I_B=0.1A$			1	V
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_{FE2}

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

■ TYPICAL CHARACTERISTICS

Fig.1 Static characteristics

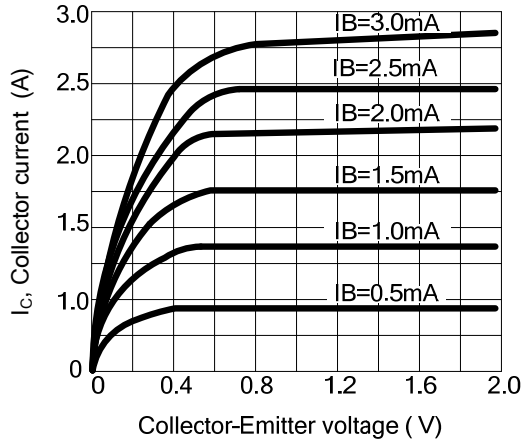


Fig.2 DC current Gain

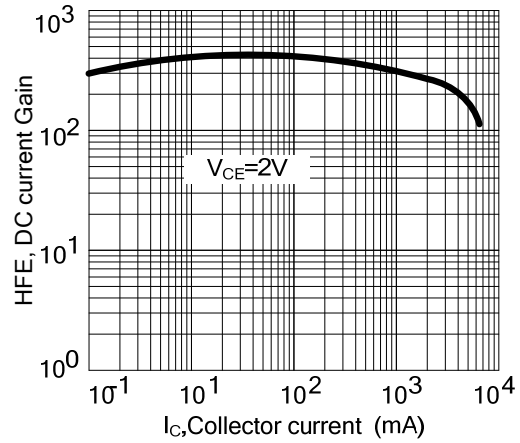


Fig.3 Base-Emitter on Voltage

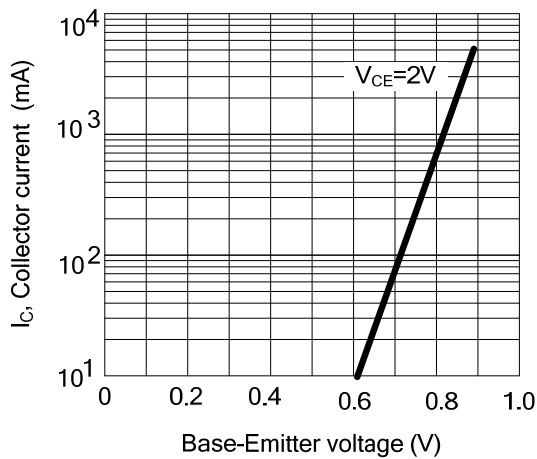


Fig.4 Saturation voltage

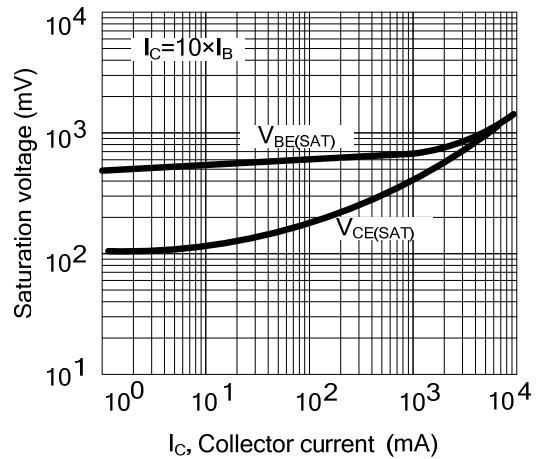


Fig.5 Current gain-bandwidth product

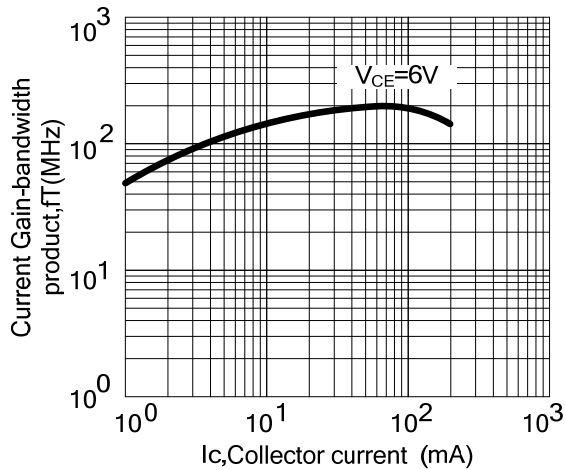
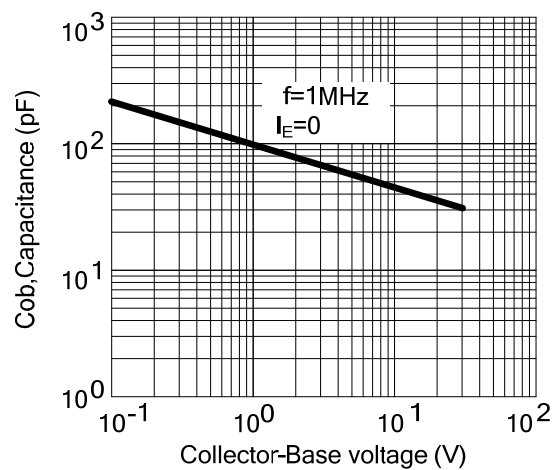


Fig.6 Collector output Capacitance



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.