



## D965SS / D965ASS

*NPN EPITAXIAL SILICON TRANSISTOR*

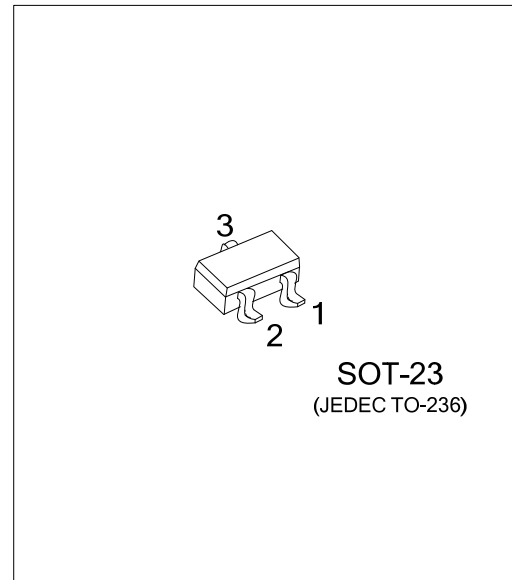
### LOW VOLTAGE HIGH CURRENT NPN TRANSISTOR

#### ■ 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
		1	2	3	
D965SSG-x-AE3-R	SOT-23	E	B	C	Tape Reel
D965ASSG-x-AE3-R	SOT-23	E	B	C	Tape Reel

<p>D965SSG-x-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23 (3) x: refer to Classification of <math>h_{FE2}</math> (4) G: Halogen Free and Lead Free</p>
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#### ■ MARKING

UTC D965SS	UTC D965ASS

# D965SS / D965ASS

## NPN EPITAXIAL SILICON TRANSISTOR

### ■ 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( $T_a=25^\circ\text{C}$ )	$P_c$	750	mW
Collector current	$I_c$	5	A
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-65 ~ +150	$^\circ\text{C}$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$BV_{CBO}$	$I_C=100\mu\text{A}, I_E=0$	40			V
Collector-emitter breakdown voltage	D965SS	$I_C=1\text{mA}, I_B=0$	20			V
	D965ASS		30			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_C=0, I_E=10\mu\text{A}$	7			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=10\text{V}, I_E=0$			100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=7\text{V}, I_C=0$			100	nA
DC current gain	$h_{FE1}$	$V_{CE}=2\text{V}, I_C=1\text{mA}$		200		
	$h_{FE2}$	$V_{CE}=2\text{V}, I_C=0.5\text{A}$	230		800	
	$h_{FE3}$	$V_{CE}=2\text{V}, I_C=2\text{A}$	150			
Collector-emitter saturation voltage	$V_{CE(SAT)}$	$I_C=3\text{A}, I_B=0.1\text{A}$			1	V
Current gain bandwidth product	$f_T$	$V_{CE}=6\text{V}, I_C=50\text{mA}$		150		MHz
Output capacitance	$C_{ob}$	$V_{CB}=20\text{V}, I_E=0, f=1\text{MHz}$			50	pF

### ■ CLASSIFICATION OF $h_{FE2}$

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

## ■ TYPICAL CHARACTERISTICS

Fig.1 Static characteristics

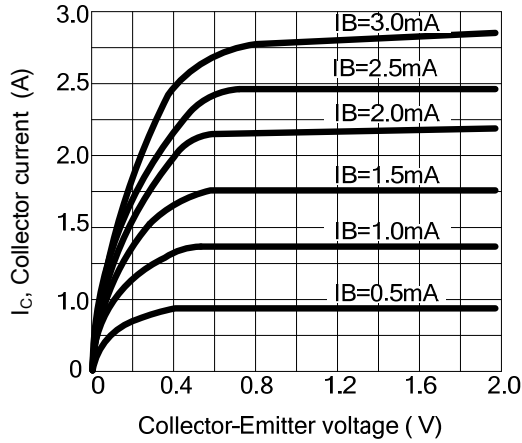


Fig.2 DC current Gain

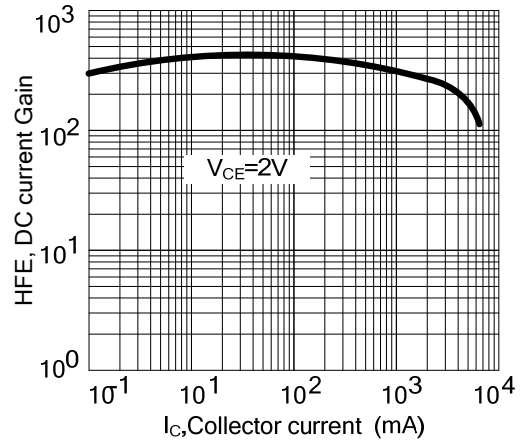


Fig.3 Base-Emitter on Voltage

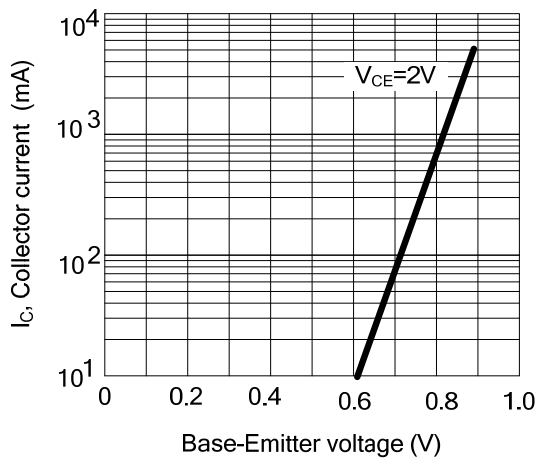


Fig.4 Saturation voltage

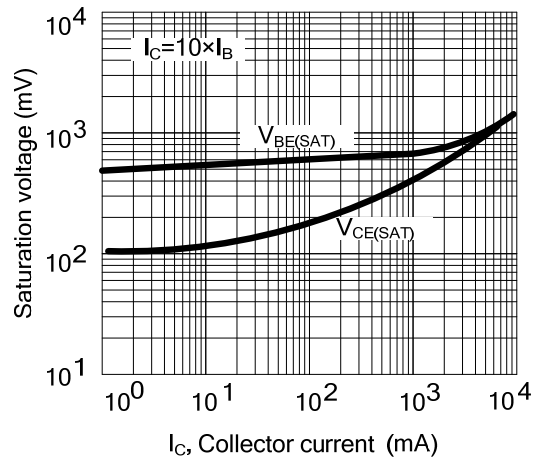


Fig.5 Current gain-bandwidth product

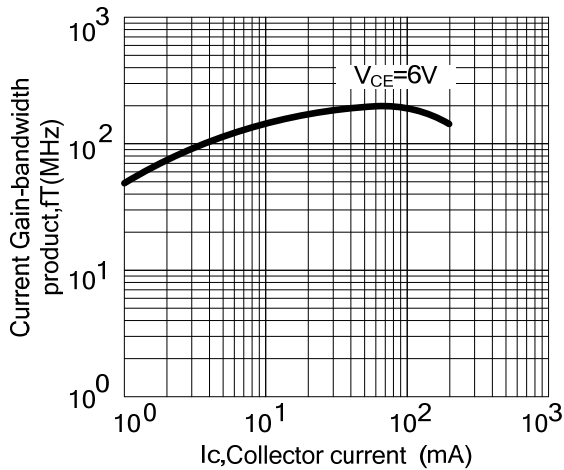
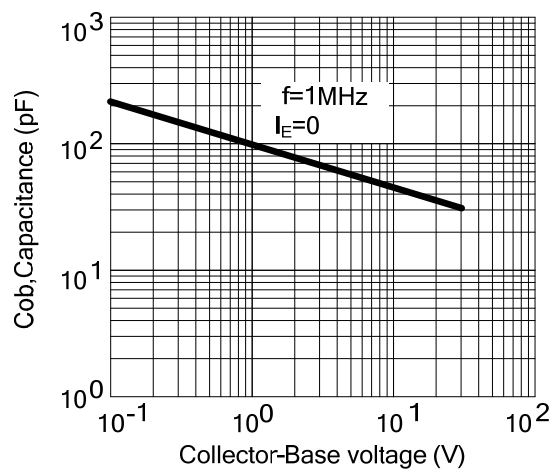


Fig.6 Collector output Capacitance



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