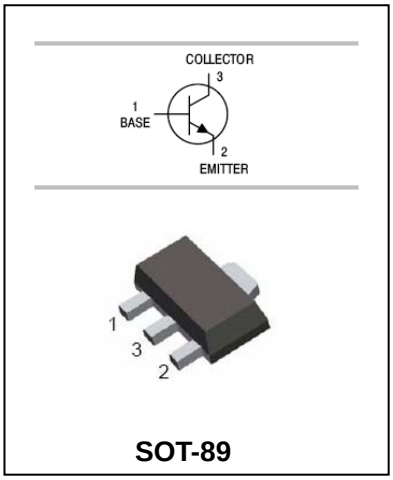
LOW VOLTAGE HIGH CURRENT TRANSISTOR 2SD965

FEATURES

- Collector current up to 5A
- Collector-Emitter voltage up to 20V

Lead-free



SOT-89

APPLICATIONS

- Audio amplifier
- Flash unit of camera
- Switching circuit

ORDERING INFORMATION

Type No.	Marking	Package Code
2SD965	D965	SOT-89

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**	**Value**	**Unit**
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	3	A
P_C	Collector power dissipation	750	mW
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65-150	℃

LOW VOLTAGE HIGH CURRENT TRANSISTOR 2SD965

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA ,I_B=0	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA, I_C=0	7			V
Collector cut-off current	I_{CBO}	V_{CB}=10V, I_E=0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=7V,I_C=0			0.1	uA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C/I_B=3A/0.1A			1	V
DC current gain(note)	h_{FE}	V_{CE}=2V, I_C=1mA		200		
		V_{CE}=2V, I_C=0.5A	230		800	
		V_{CE}=2V, I_C=0.1A	150			
Current gain bandwidth product	f_T	V_{CE}=6V,I_C=50mA		150		MHz
Output Capacitance	C_{ob}	V_{CB}=20V, f=1MHz ,I_E=0A			50	pF

CLASSIFICATION OF h_{FE2}

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

LOW VOLTAGE HIGH CURRENT TRANSISTOR 2SD965

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Fig.1 Static characteristics

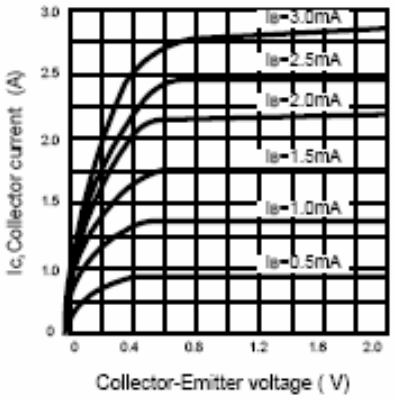


Fig.2 DC current Gain

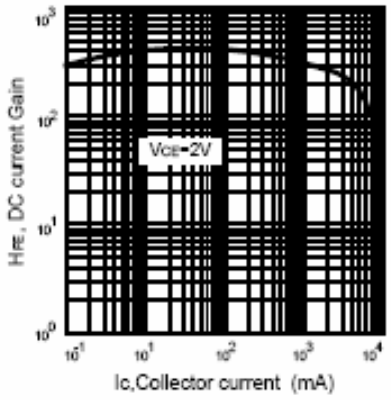


Fig.3 Base-Emitter on Voltage

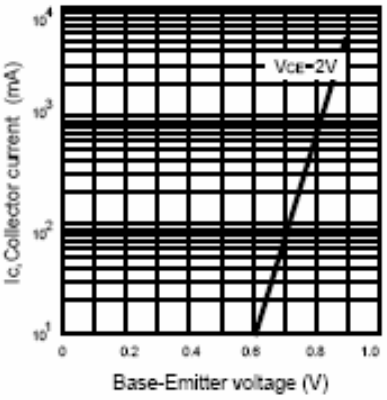


Fig.4 Saturation voltage

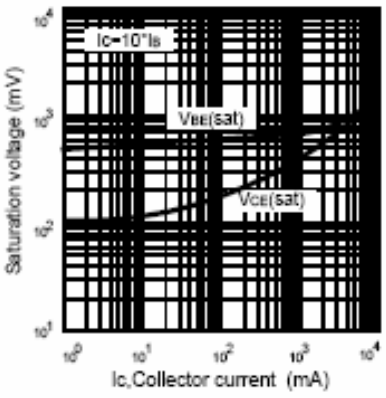


Fig.5 Current gain-bandwidth product

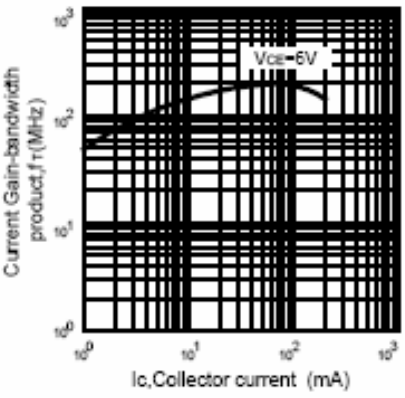
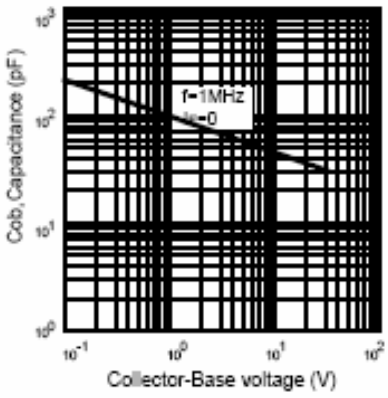


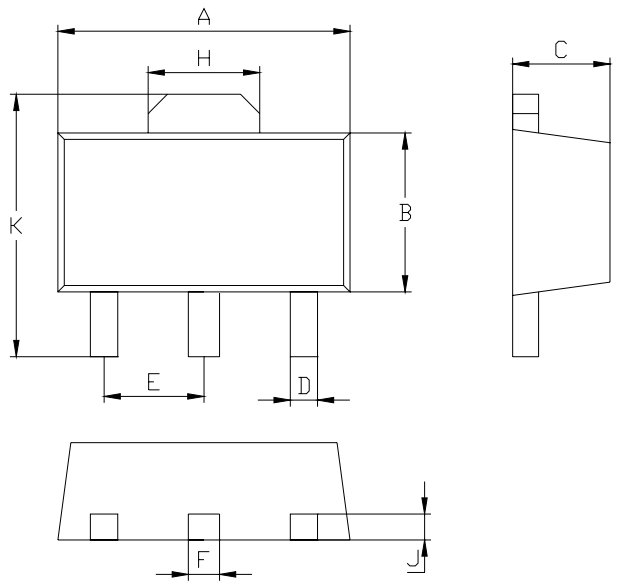
Fig.6 Collector output Capacitance



LOW VOLTAGE HIGH CURRENT TRANSISTOR 2SD965

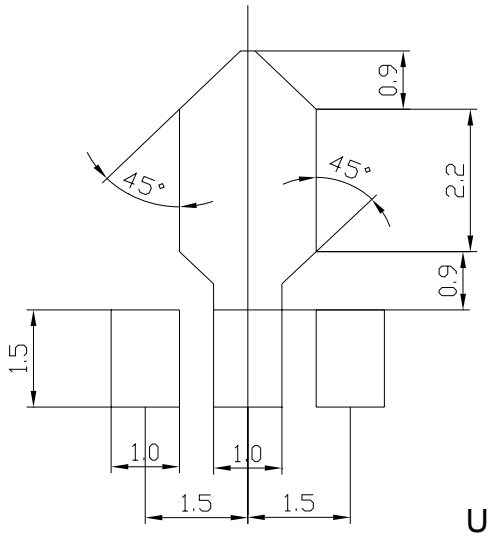
PACKAGE OUTLIN

Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.5	4.7
B	2.3	2.7
C	1.5Typical	
D	0.35	0.55
E	1.4	1.6
F	0.4	0.6
H	1.55	1.75
J	0.4Typical	
K	4.15	4.25
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

Device	Package	Shipping
2SD965	SOT-89	1000/Tape&Reel