

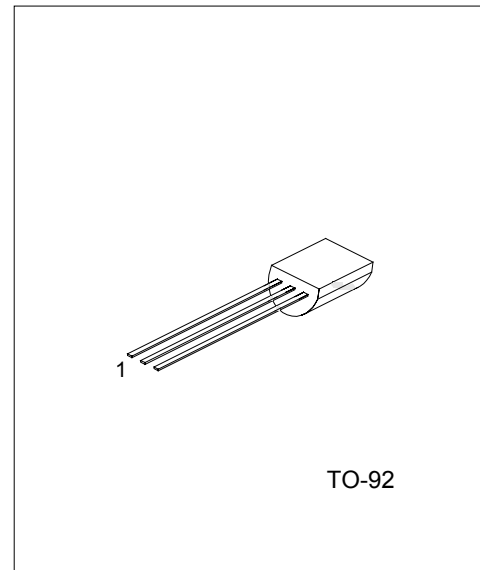
LOW VOLTAGE HIGH CURRENT
NPN TRANSISTOR

FEATURES

- * Collector current up to 5A
- * 2SD965B : Collector-Emitter voltage up to 30 V

APPLICATIONS

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



1: EMITTER 2: COLLECTOR 3: BASE

*Pb-free plating product number: 2SD965BL

ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-base voltage	V _{CB0}	40	V
Collector-emitter voltage	V _{CEO}	30	V
Emitter-base voltage	V _{EB0}	7	V
Collector dissipation(Ta=25°C)	P _c	750	mW
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	30			V
Emitter-base breakdown voltage	BV _{EB0}	I _E =10μA, I _c =0	7			V
Collector cut-off current	I _{CB0}	V _{CB} =30V, I _E =0			200	nA
Emitter cut-off current	I _{EB0}	V _{EB} =7V, I _c =0			200	nA
DC current gain(note)	h _{FE} 1 h _{FE} 2 h _{FE} 3	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
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}2

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

TYPICAL CHARACTERISTIC CURVES

Fig.1 Static characteristics

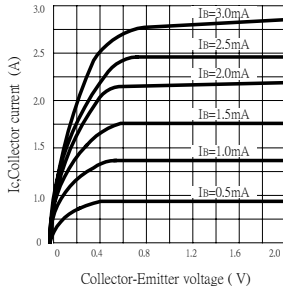


Fig.2 DC current Gain

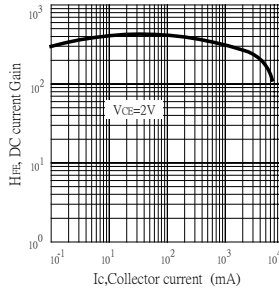


Fig.3 Base-Emitter on Voltage

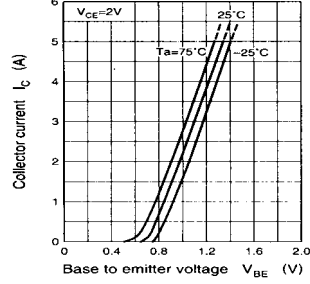


Fig.4 Saturation voltage

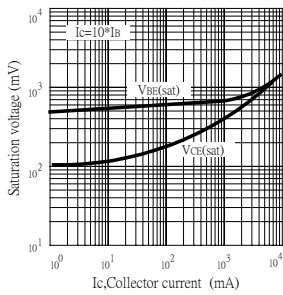


Fig.5 Current gain-bandwidth product

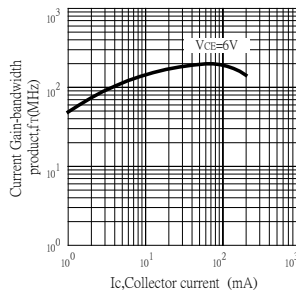
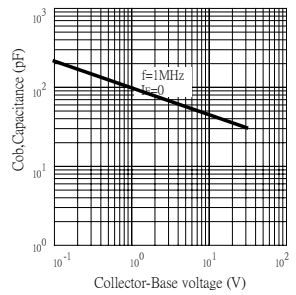


Fig.6 Collector output Capacitance



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