



TO-18 Plastic-Encapsulate Transistors

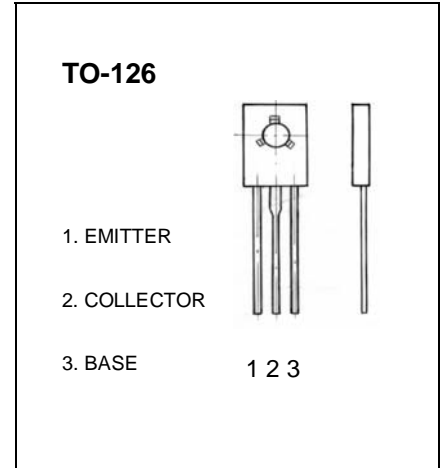
RD9FE TRANSISTOR (NPN)

FEATURES

- Audio amplifier
- Flash unit of camera
- Switching circuit

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	42	V
V _{CE0}	Collector-Emitter Voltage	22	V
V _{EB0}	Emitter-Base Voltage	6	V
I _C	Collector Current -Continuous	5	A
P _C	Collector Power Dissipation	750	mW
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C



ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =0.1mA, I _E =0	42			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	22			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C =0	6			V
Collector cut-off current	I _{CBO}	V _{CB} =30V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =6V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =2V, I _C = 0.15 mA	150			
	h _{FE(2)}	V _{CE} = 2V, I _C = 500 mA	340		2000	
	h _{FE(3)}	V _{CE} =2V, I _C = 2A	150			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =3000mA, I _B =100 mA			0.5	V
Transition frequency	f _T	V _{CE} =6V, I _C =50mA, f=30MHz		150		MHz

CLASSIFICATION OF h_{FE(2)}

Rank	R	T	V
Range	400-800	560-950	900-2000

Typical Characteristics

D965

Fig.1 Static characteristics

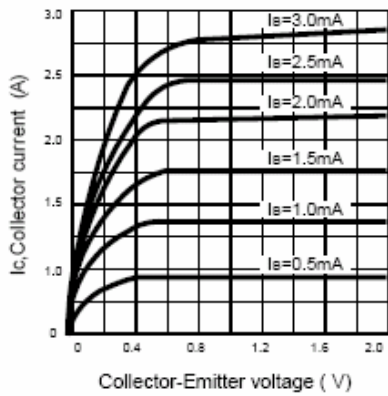


Fig.2 DC current Gain

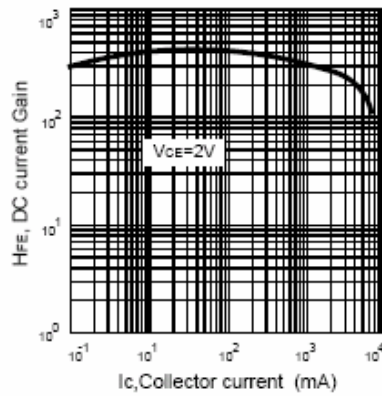


Fig.3 Base-Emitter on Voltage

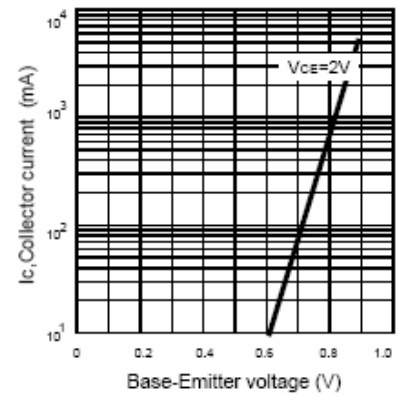


Fig.4 Saturation voltage

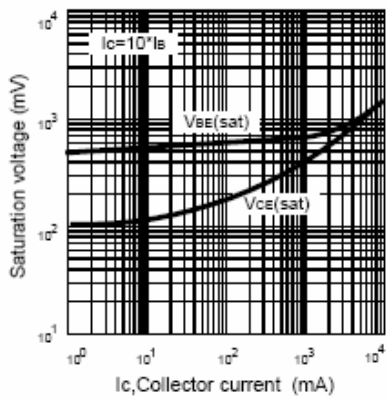


Fig.5 Current gain-bandwidth product

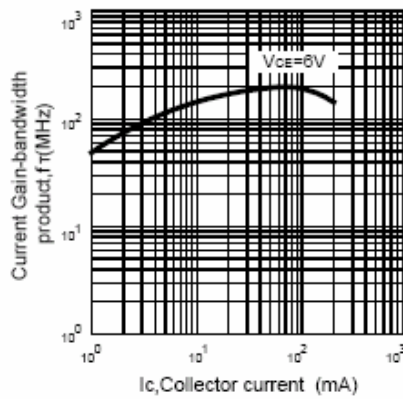
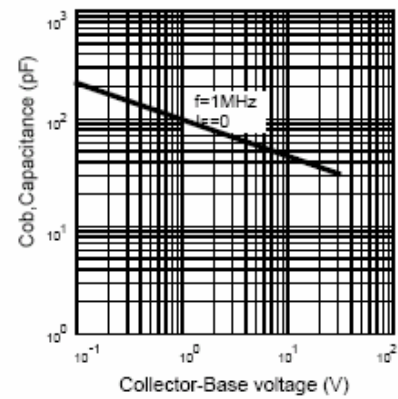
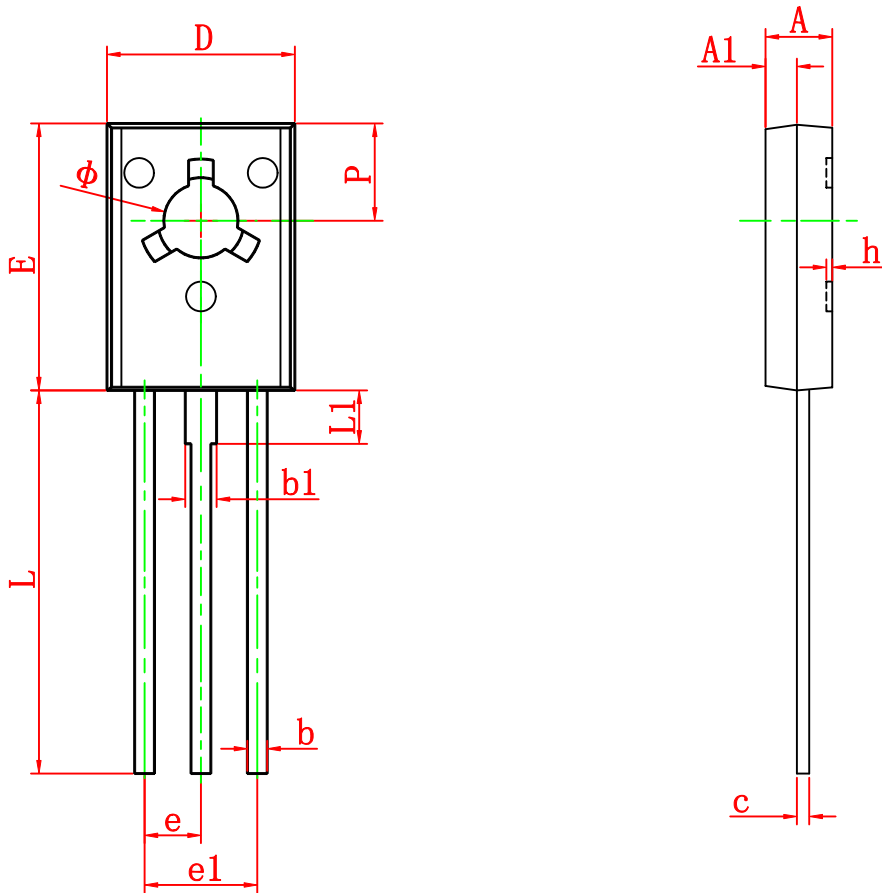


Fig.6 Collector output Capacitance



TO-126 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290 TYP		0.090 TYP	
e1	4.480	4.680	0.176	0.184
h	0.000	0.300	0.000	0.012
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
ϕ	3.000	3.200	0.118	0.126