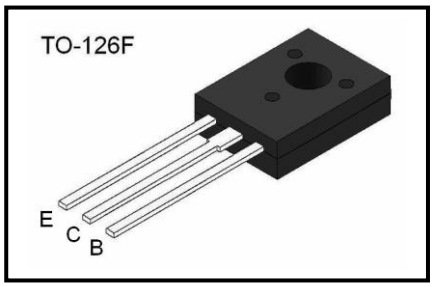
Application

• Low frequency power amplifier



Features

• Hiigh brokendown voltage
• Complementary NPN type is 2SD669A

Absolute Maximum Rating (Ta=25℃)

Parameter	Symbol	Value	Unit
Collector-base voltage	BV_{CBO}	-180	V
Collector-emitter voltage	BV_{CEO}	-160	V
Emitter-base voltage	BV_{EBO}	-5	V
Collector current	I_C	-1.5	A
Collector power dissipation	P_C	1	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55～150	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage	BV_{CBO}	I_C = -100μA，I_E = 0	-180			V
Collector-emitter voltage	BV_{CEO}	I_C = -10mA，I_B = 0	-160			V
Emitter-base voltage	BV_{EBO}	I_E = -100μA，I_C = 0	-5			V
Collector cut-off current	I_{CBO}	V_{CB} = -160V，I_E = 0			-10	μA
Emitter cut-off current	I_{EBO}	V_{EB} = -5V，I_C = 0			-10	μA
DC current gain	$h_{FE}1$	V_{CE}= -2V，I_C= -150mA	60		320	
	$h_{FE}2$	V_{CE}= -2V，I_C= -500mA	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = -500mA，I_B =- 50mA			-1	V
Base -emitter saturation voltage	$V_{BE(sat)}$	I_C = -500mA，I_B =- 50mA			-1.5	V
Transition frequency	f_T	V_{CE} = -5V，I_C= -150mA		140		MHz
Output capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz		27		pF

$h_{FE}1$ Classification

Classification	B	C	D
Range	60~120	100~200	160~320

Typical Characteristics

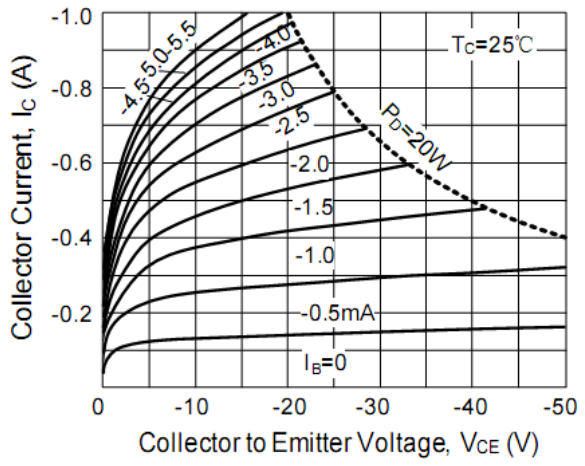


Figure.1 Static characteristics

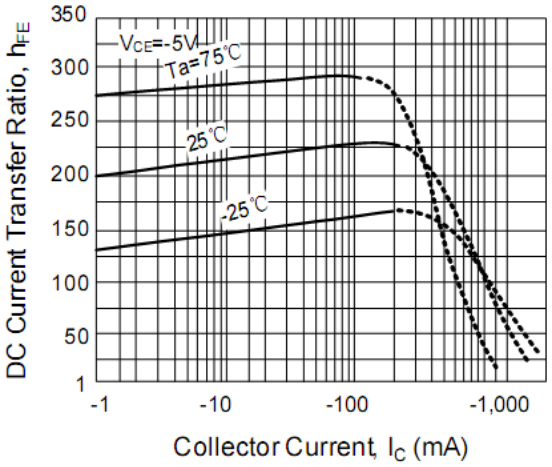


Figure.2 DC Current Gain

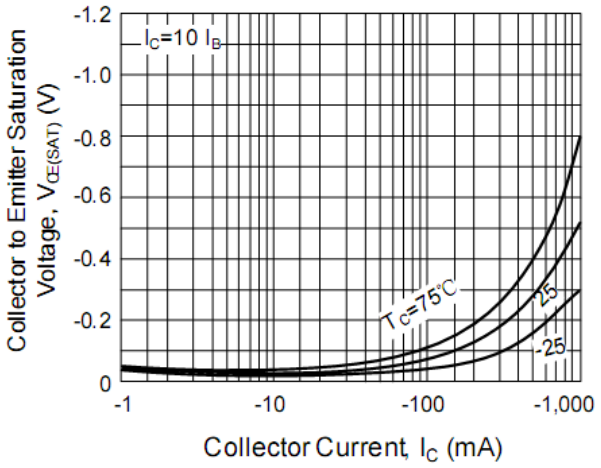


Figure.3 Collector -Emtter Saturation voltage

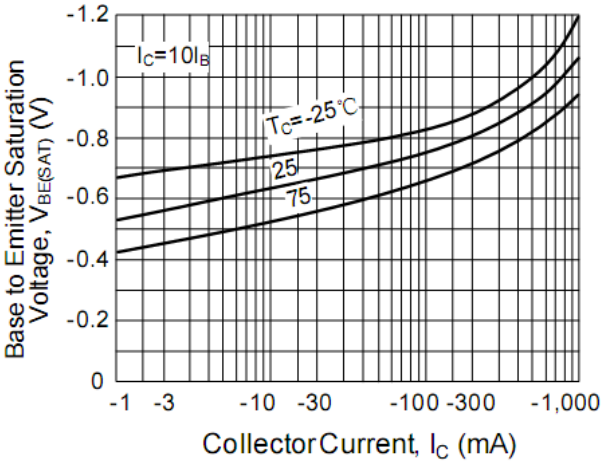


Figure.3 Base-Emitter on Saturation voltage

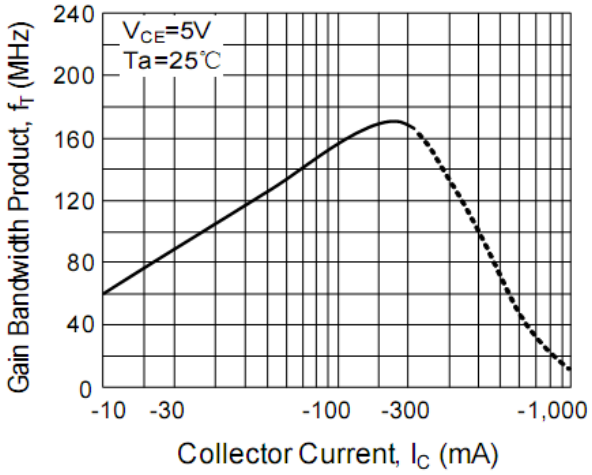


Figure.5. Current Gain-Bandwidth Product

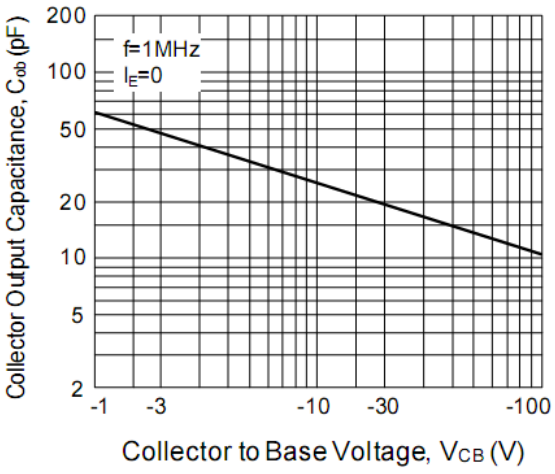
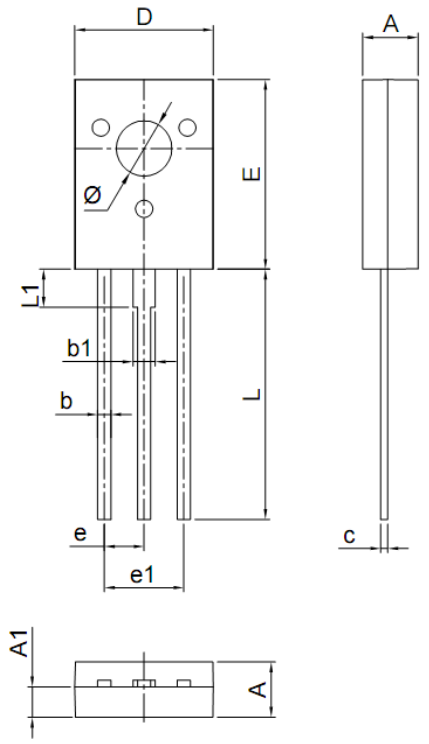


Figure 6. Collector Output Capacitance

Package Dimensions



Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.30	0.110	0.130
A1	1.40	2.00	0.039	0.055
b	0.66	0.86	0.026	0.034
b1	1.17	1.37	0.046	0.054
c	0.30	0.50	0.012	0.020
D	7.70	8.10	0.303	0.319
E	10.00	11.00	0.417	0.433
e	2.25	2.33	0.089	0.092
e1	4.50	4.66	0.177	0.183
L	14.50	15.50	0.571	0.610
L1	1.90	2.50	0.075	0.098
Φ	3.10	3.30	0.122	0.130