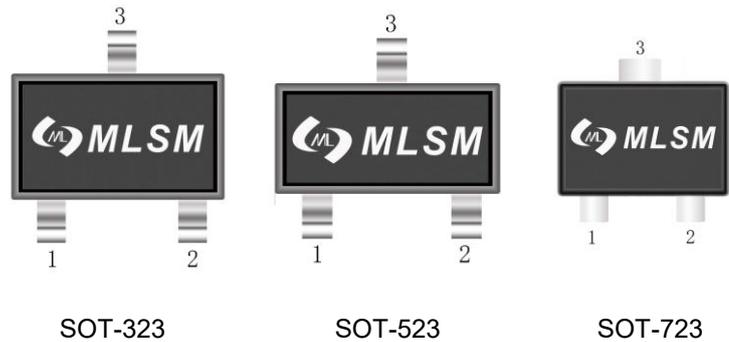


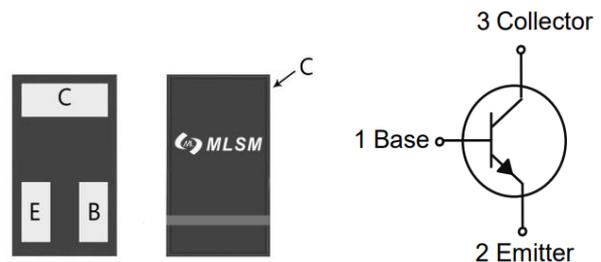
Features

- Low Noise and High Gain
- High Power Gain



Application

- low noise amplifier at VHF, UHF and CATV band applications



Halogen-Free

DFN1006-3L

Schematic diagram

Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	15	V
V_{CEO}	Collector-Emitter Voltage	6	V
V_{EBO}	Emitter-Base Voltage	2	V
I_C	Collector Current	20	mA
P_C	Collector Power Dissipation	75	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	1.67	°C/mW
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-50~+150	°C

Ordering Information (Example)

Part Number	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BFR340	SOT-323	FA _S	3,000	45,000	180,000	7" reel
BFR340T	SOT-523	FA _S	3,000	45,000	180,000	7" reel
BFR340F	SOT-723	FA _S	8,000	120,000	480,000	7" reel
BFR340L3	DFN1006-3L	FA	10,000	150,000	600,000	7" reel

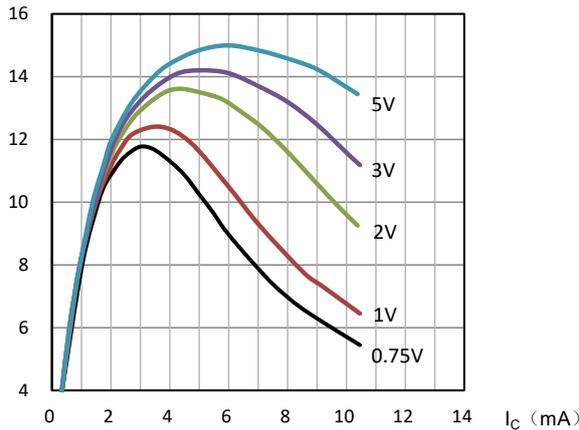


Electrical Characteristics (T_J=25°C unless otherwise noted)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =100μA, I _E =0	15	--	--	V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =1mA, I _B =0	6	--	--	V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =10μA, I _C =0	2	--	--	V
I _{CBO}	Collector cut-off current	V _{CB} =5 V, I _E =0	--	--	100	nA
I _{EBO}	Emitter cut-off current	V _{EB} = 1V, I _C =0	--	--	1	μA
h _{FE}	DC current gain	V _{CE} =3V, I _C = 5mA	60	--	200	
C _{CB}	Collector Base Capacitance	V _{CB} =5V, V _{BE} =0V, f=1MHz, Emitter Grounded	--	0.24	--	pF
C _{CE}	Collector Emitter Capacitance	V _{CE} =5V, V _{BE} =0V, f=1MHz, Base Grounded	--	0.2	--	pF
C _{EB}	Emitter Base Capacitance	V _{EB} =0.5V, V _{CB} =0V, f=1MHz, Collector Grounded	--	0.12	--	pF
f _T	Transition frequency	V _{CB} =3V, I _C =5mA, f=1GHz	11	14	--	GHz

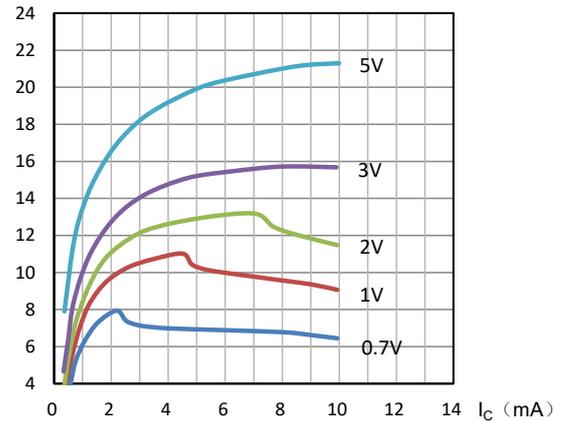
Typical Operating Characteristics

f_T (GHz)



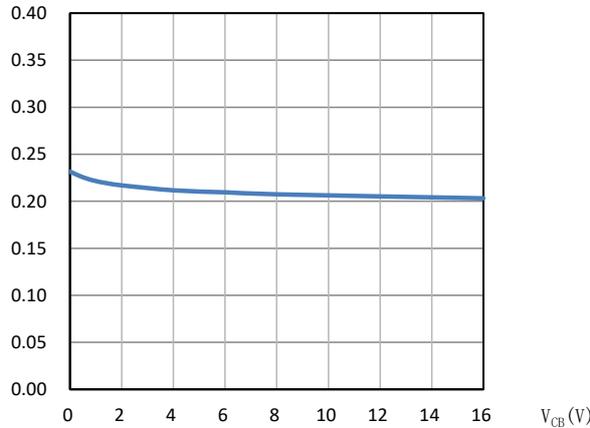
Transition frequency $f_T = f(I_C)$, $f = 1$ GHz,
 $V_{CE} = \text{parameter}$

G(dB)



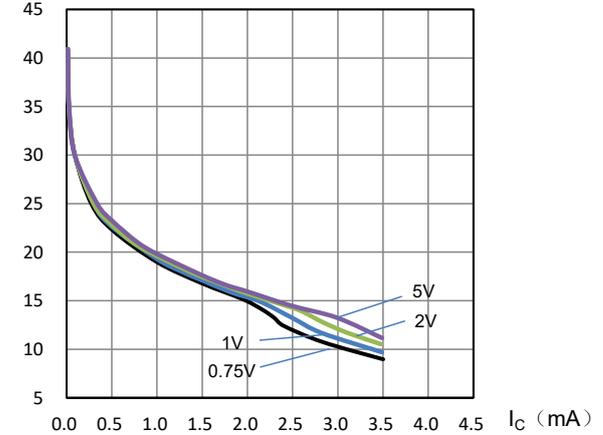
Maximum power gain $G_{max} = f(I_C)$,
 $V_{CE} = 3$ V, $f = \text{parameter}$

C_{CB} (pF)



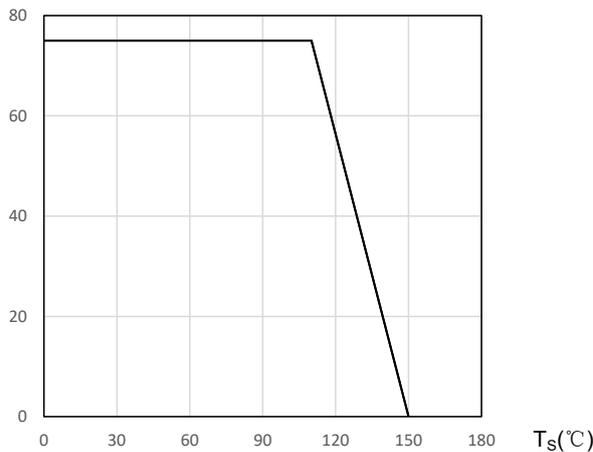
Collector base capacitance
 $C_{CB} = f(V_{CE})$, $f = 1$ MHz

G(dB)

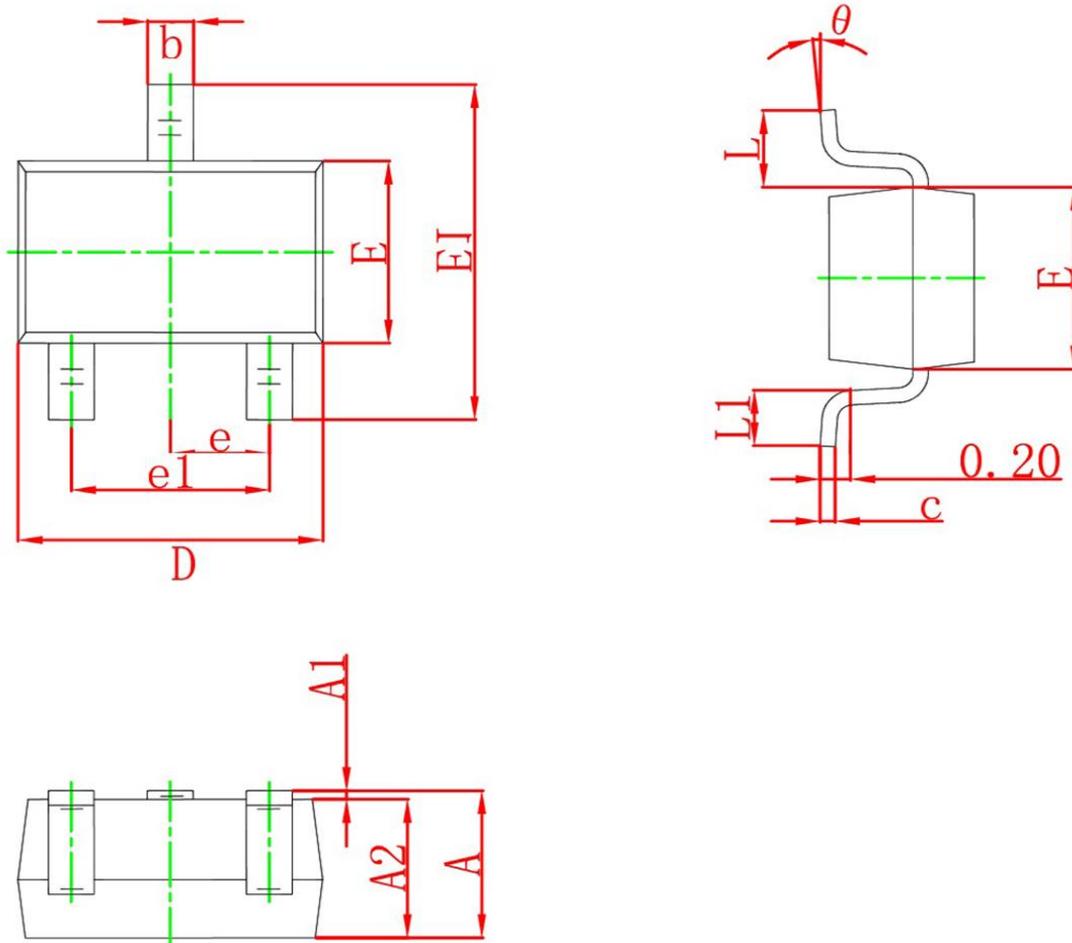


Gain $|S_{21}|^2 = f(f)$, $I_C = 40$ mA,
 $V_{CE} = \text{parameter}$

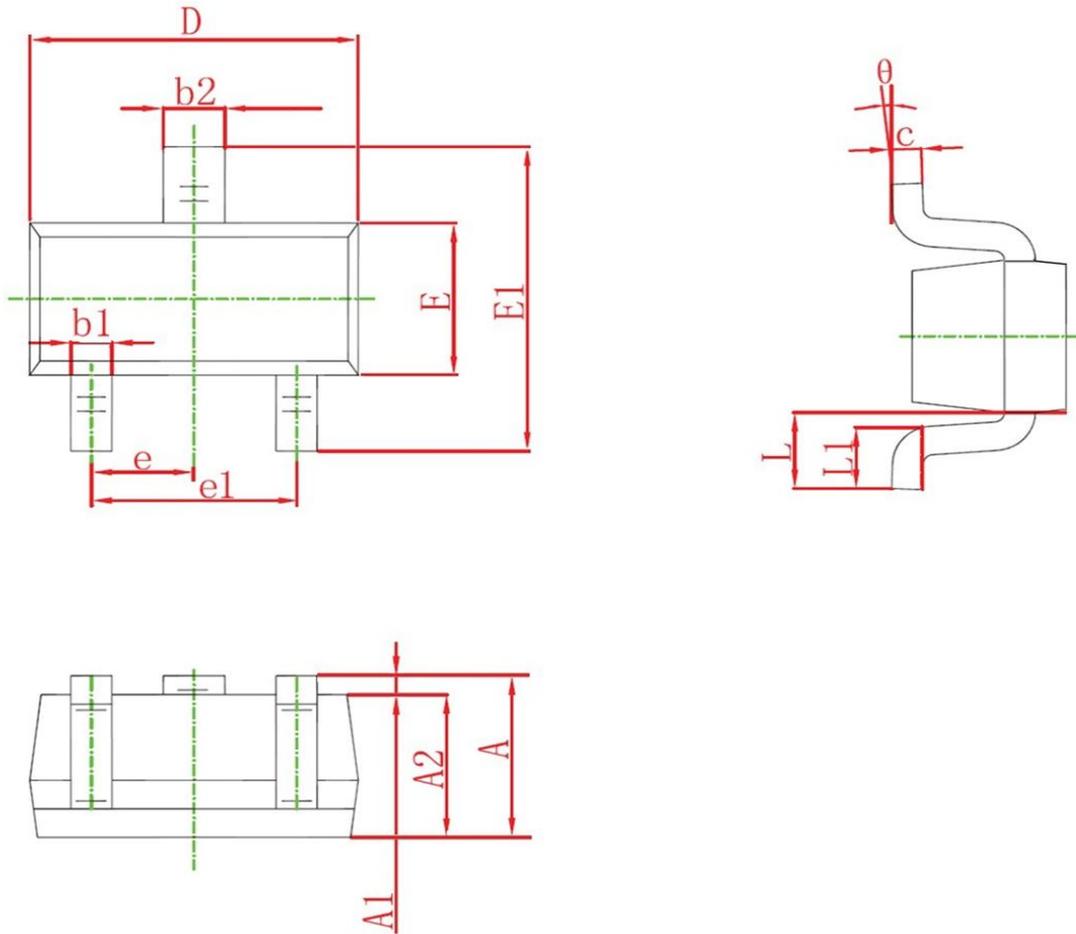
P_{tot} (W)



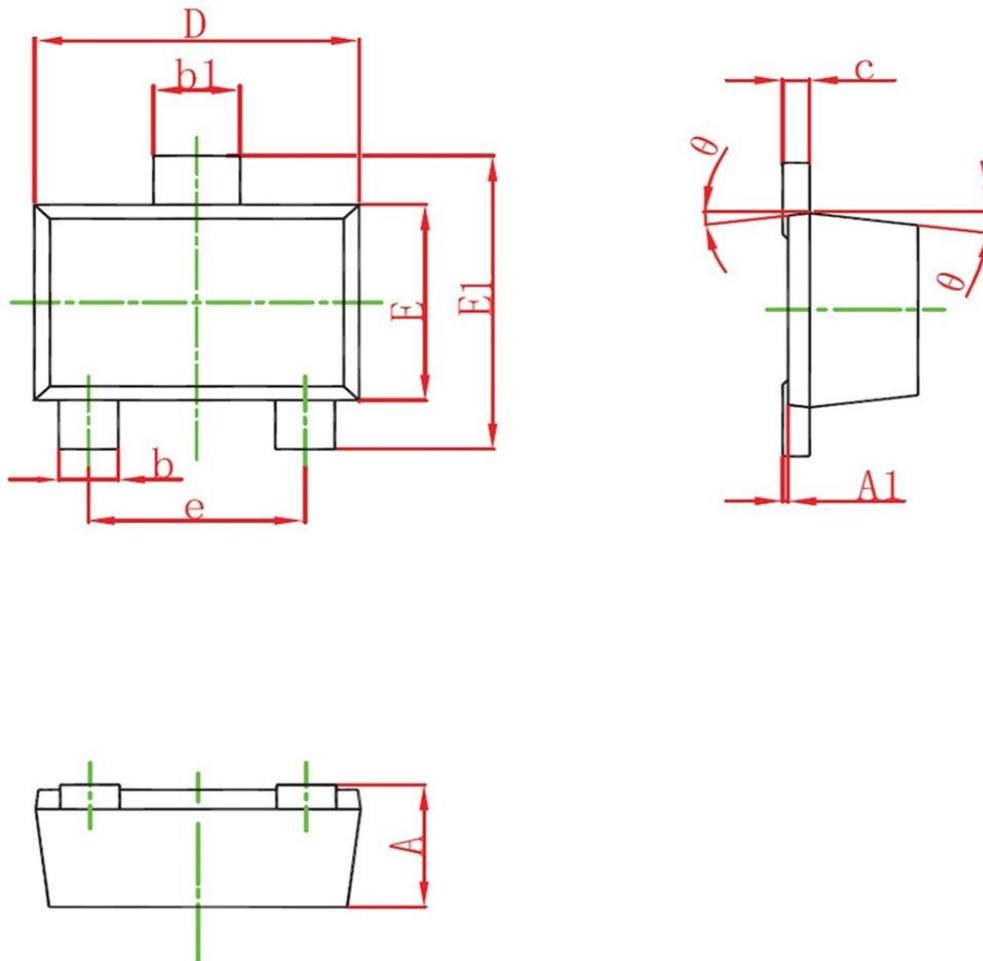
Power derating curve

SOT-323 Package information


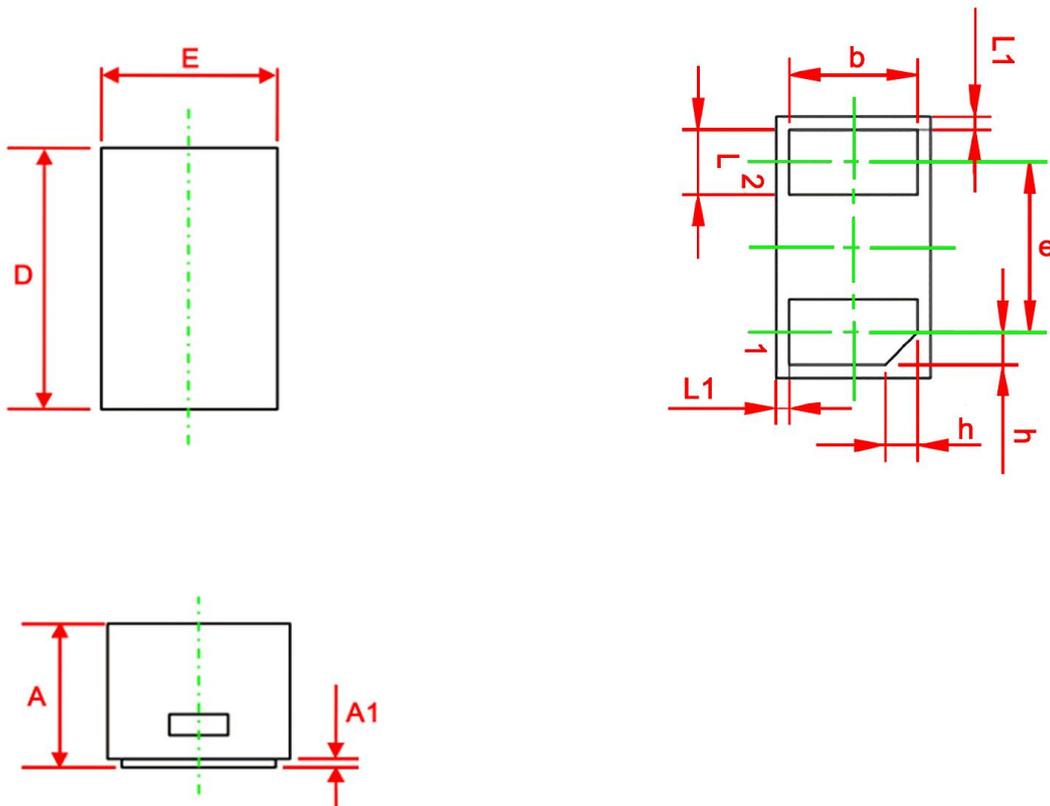
Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-523 Package information


Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500TYP		0.020TYP	
e1	0.900	1.100	0.035	0.043
L	0.400REF		0.016REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-723 Package information


Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.320	0.400	0.012	0.016
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.006	0.010
b1	0.270	0.370	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.046	0.050
E	0.750	0.850	0.030	0.034
E1	1.150	1.250	0.046	0.050
e	0.800TYP		0.020TYP	
θ	7°REF		7°REF	

DFN1006-3L Package information


Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.450	0.550	0.017	0.021
A1	0.000	0.030	0.000	0.001
D	0.950	1.050	0.037	0.041
E	0.550	0.650	0.021	0.025
b	0.470	0.550	0.018	0.021
e	0.65TYP		0.025TYP	
e2	0.35TYP		0.013TYP	
L1	0.05TYP		0.001TYP	
L	0.220	0.300	0.008	0.012
b1	0.110	0.190	0.004	0.007