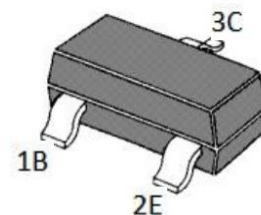




MMBTSC3356 Silicon Epitaxial Planar Transistor

for microwave low noise amplifier at VHF, UHF and CATV band

The transistor is subdivided into three groups, Q, R and S, according to its DC current gain.



SOT-23-3L

HFE	MARKING
Q	R23
R	R24
S	R25

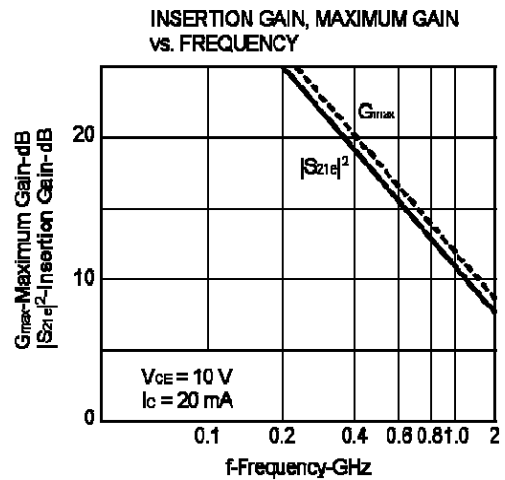
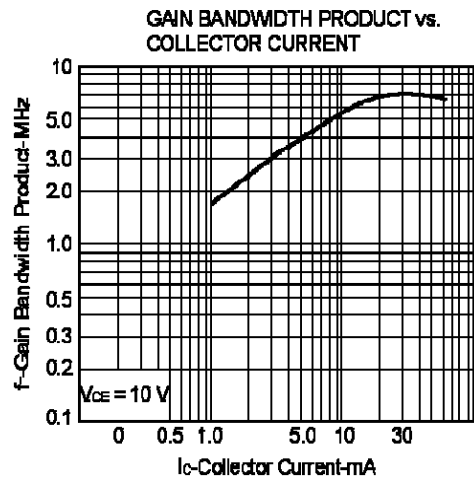
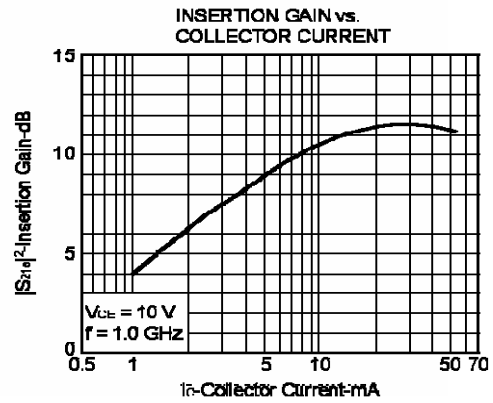
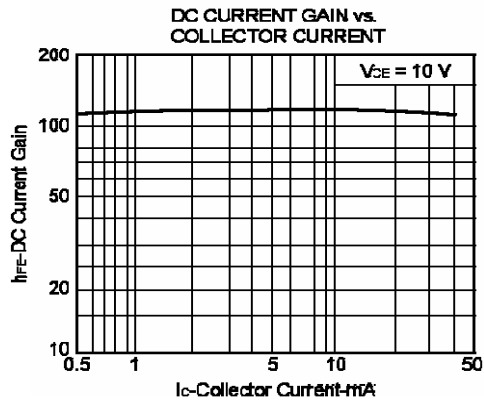
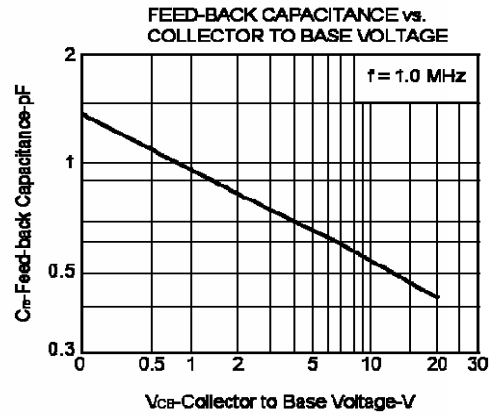
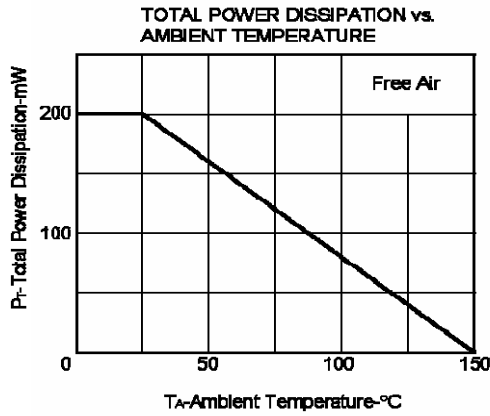
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V _{CBO}	20	V
Collector Emitter Voltage	V _{CEO}	12	V
Emitter Base Voltage	V _{EBO}	3	V
Collector Current	I _c	100	mA
Power Dissipation	P _{tot}	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _s	- 65 to + 150	°C

Characteristics (T_a = 25 °C)

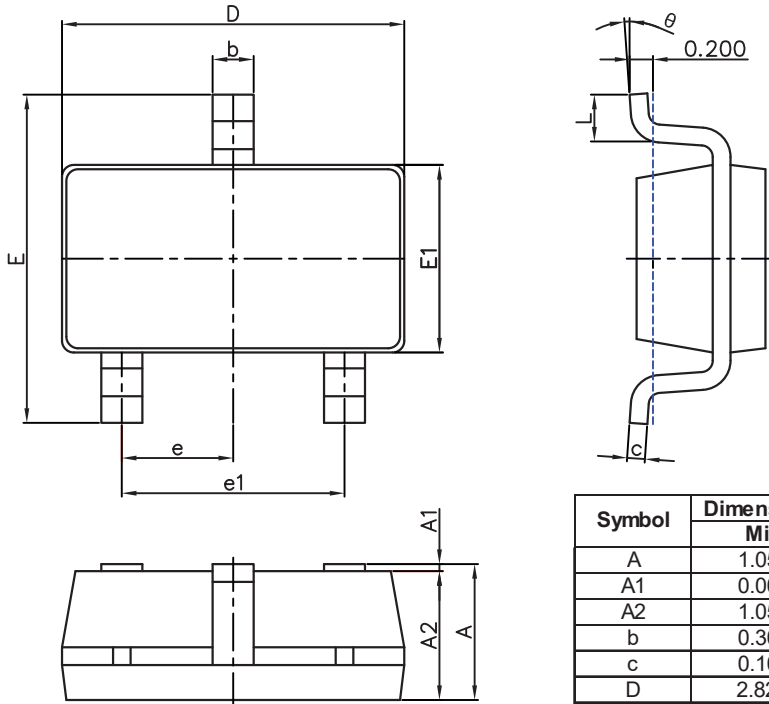
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V _{CE} = 10 V, I _c = 20 mA Current Gain Group	Q h _{FE}	50	-	100	-
	R h _{FE}	80	-	160	-
	S h _{FE}	125	-	250	-
Collector Cutoff Current at V _{CB} = 10 V	I _{CBO}	-	-	1	μA
Emitter Cutoff Current at V _{EB} = 1 V	I _{EBO}	-	-	1	μA
Gain Bandwidth Product at V _{CE} = 10 V, I _c = 20 mA	f _T	-	7	-	GHz
Feed-Back Capacitance at V _{CB} = 10 V, f = 1 MHz	C _{re} ¹⁾	-	0.55	1	pF
Noise Figure at V _{CE} = 10 V, I _c = 7 mA, f = 1 GHz	NF	-	1.1	2	dB

1) The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.



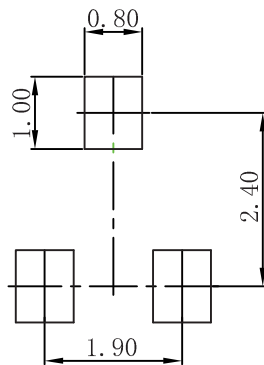


SOT23-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
K	0°	8°	0°	8°

SOT23-3L Suggested Pad Lay out



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.