Lastinght

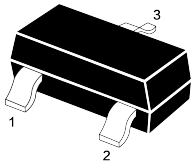
MMBTSC3356

NPN 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



1. BASE
2. EMITTER
3. COLLECTOR

RoHS COMPLIANT

Pb-Free

Absolute Maximum Ratings (T_a = 25 ℃)

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

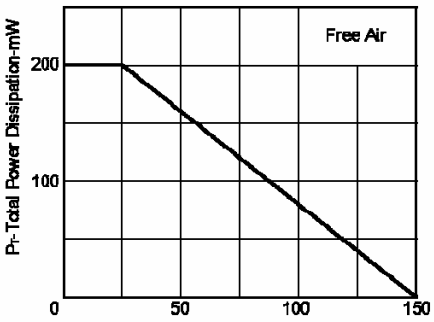
Characteristics (T_a = 25°C)

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

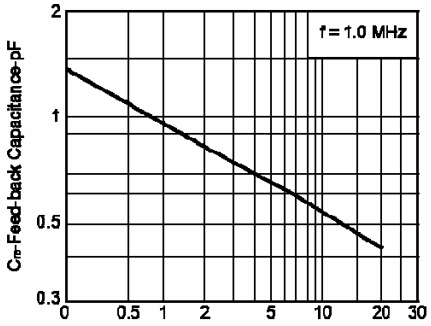
[(1)] The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.

Typical Characteristics

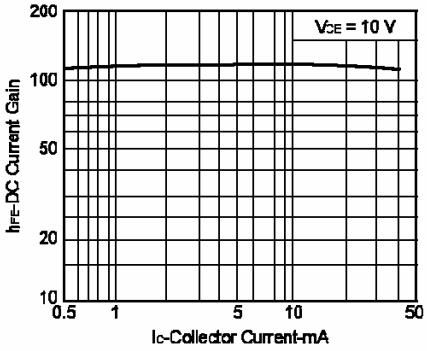
TOTAL POWER DISSIPATION vs.
AMBIENT TEMPERATURE



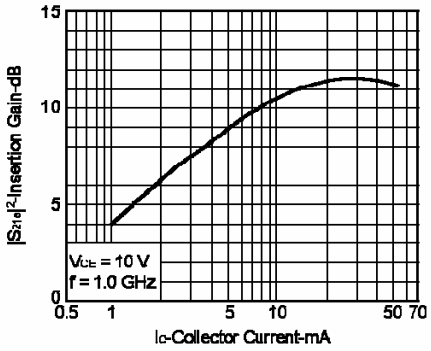
FEED-BACK CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE



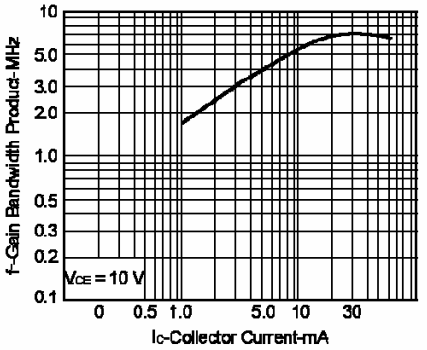
DC CURRENT GAIN vs.
COLLECTOR CURRENT



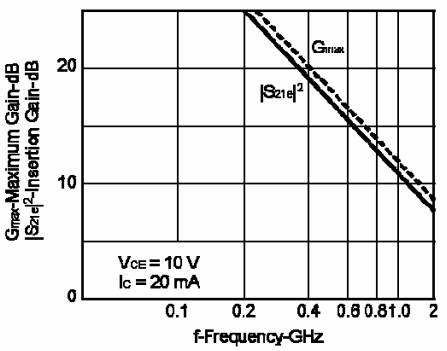
INSERTION GAIN vs.
COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs.
COLLECTOR CURRENT

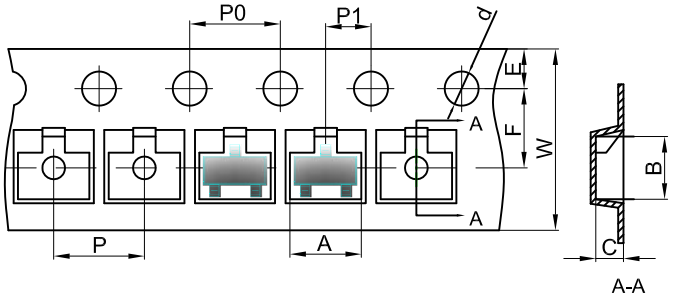


INSERTION GAIN, MAXIMUM GAIN
vs. FREQUENCY



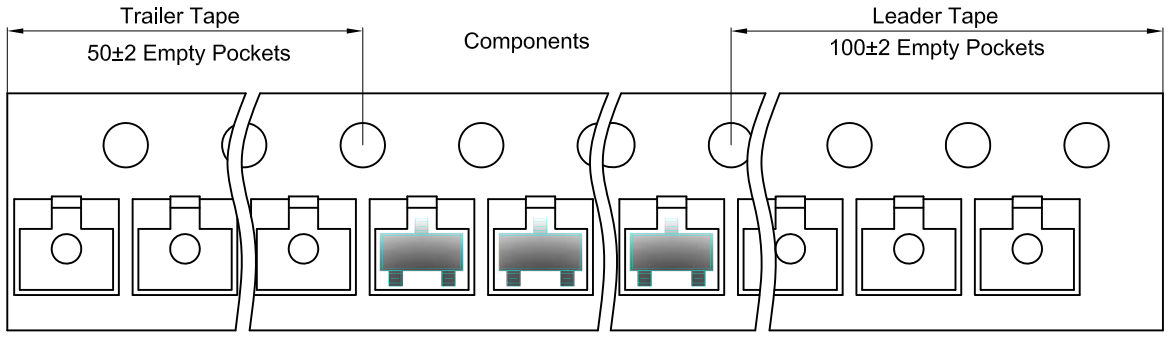
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

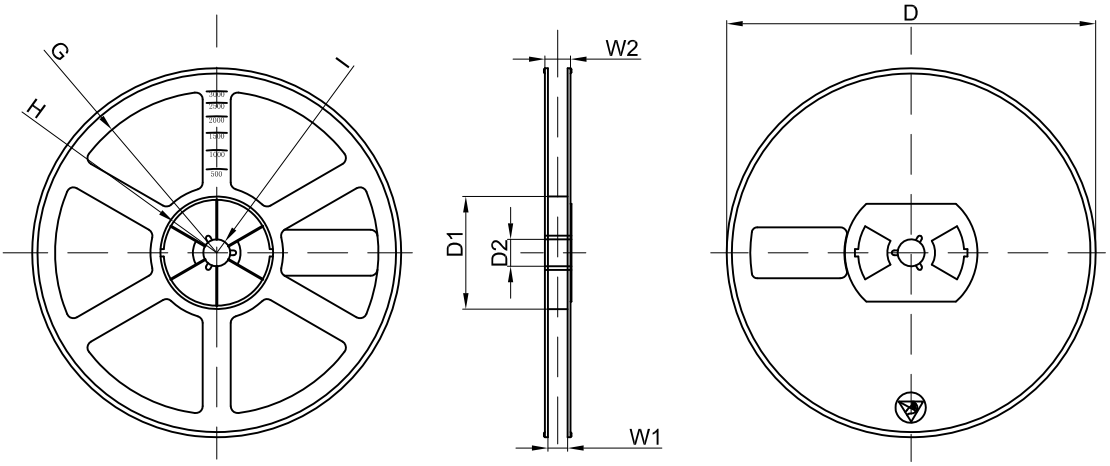


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

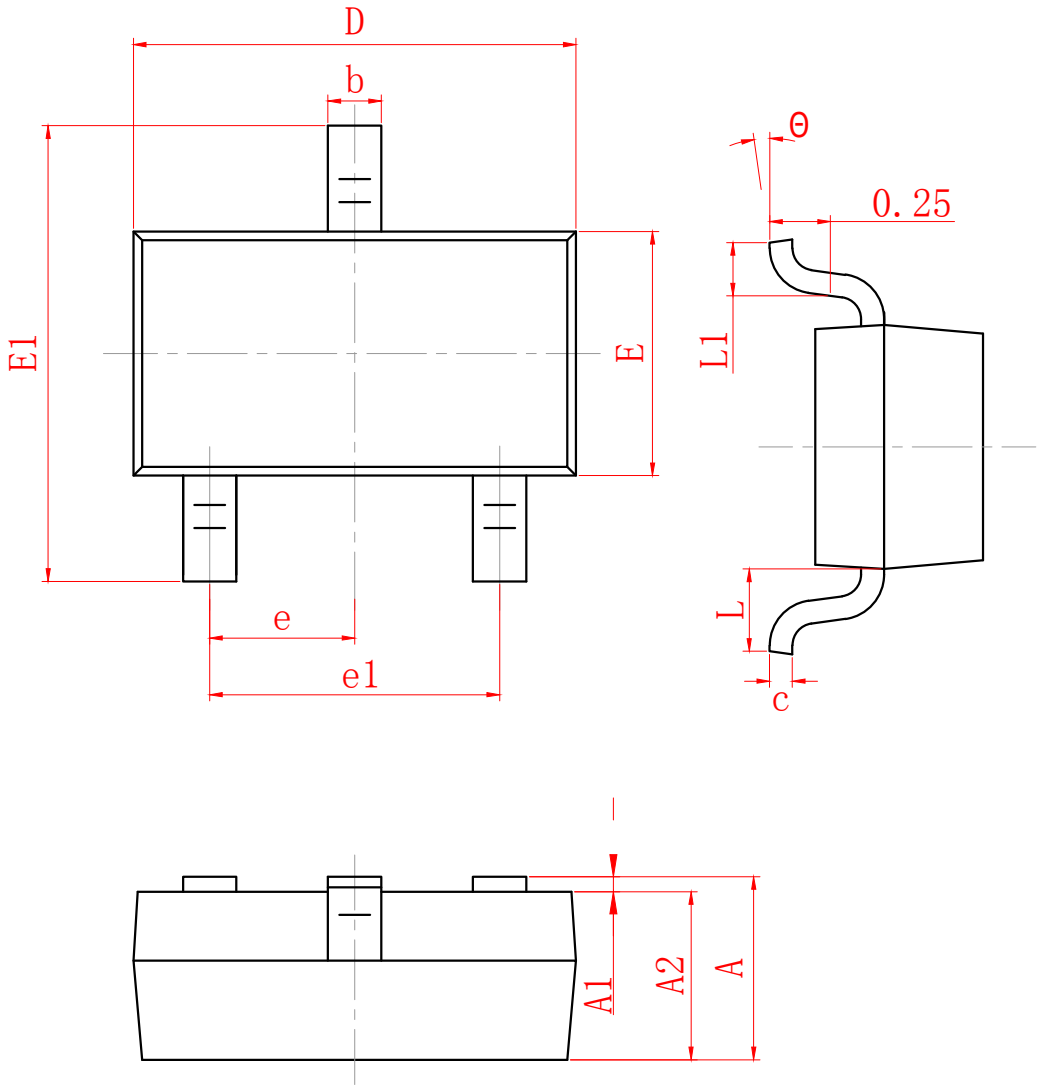


SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	



SYMBOL	MILLIMETER	
	MIN	MAX
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950 TYP	
e1	1.800	2.000
L	0.550 REF	
L1	0.300	0.500
θ	0°	8°

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