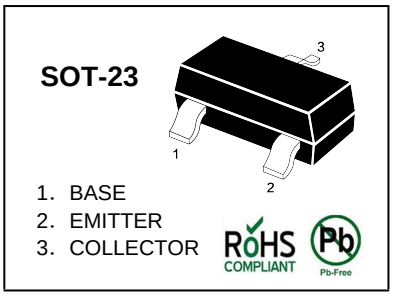
Lastinght

MMBTSC5065



NPN Silicon Epitaxial Planar Transistor

for low noise, high gain amplifier at VHF~UHF band.

The transistor is subdivided into two groups
O and Y, according to its DC current gain.

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
Base Current	I_B	15	mA
Collector Current	I_C	30	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_S	-55 to +125	°C

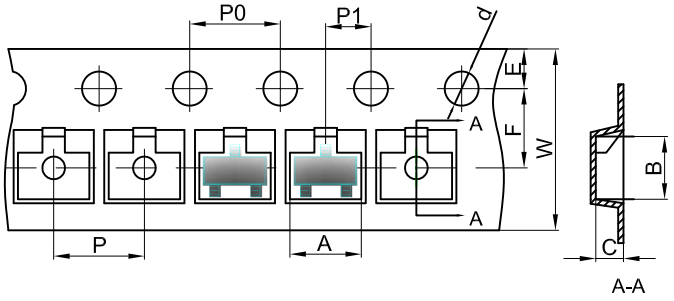
Characteristics at T_{amb}=25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE}=5V, I_C=10mA					
Current Gain Group O	h_{FE}	80	-	160	-
Y	h_{FE}	120	-	240	-
Collector Cutoff Current at V_{CB}=10V	I_{CBO}	-	-	1	μA
Emitter Cutoff Current at V_{EB}=1.0V	I_{EBO}	-	-	1	μA
Transition Frequency at V_{CE}=5V, I_C=10mA	f_T	5	7	-	GHz
Reverse Transfer Capacitance at V_{CB}=5V, f=1MHz [1)]	C_{re}	-	0.45	0.9	pF
Output Capacitance at V_{CB}=5V, f=1MHz [1)]	C_{ob}	-	0.7	-	pF
Insertion Gain at V_{CE}=5V, I_C=10mA, f=500MHz	$\lvert S_{21e} \rvert^2_1$	-	17	-	dB
Insertion Gain at V_{CE}=5V, I_C=10mA, f=1.0GHz	$\lvert S_{21e} \rvert^2_2$	8.5	12	-	dB
Noise Figure at V_{CE}=5V, I_C=3mA, f=500MHz	NF_1	-	1	-	dB
Noise Figure at V_{CE}=5V, I_C=3mA, f=1.0GHz	NF_2	-	1.1	2	dB

(1) C_{re} is measured by 3 terminal method with capacitance bridge.

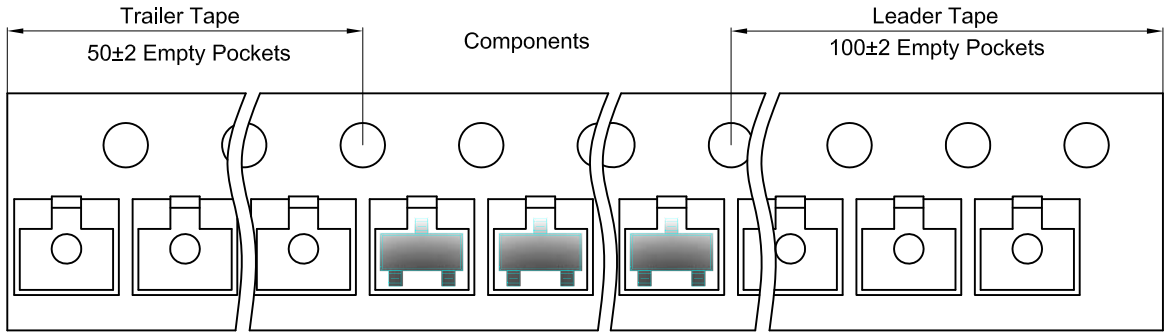
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

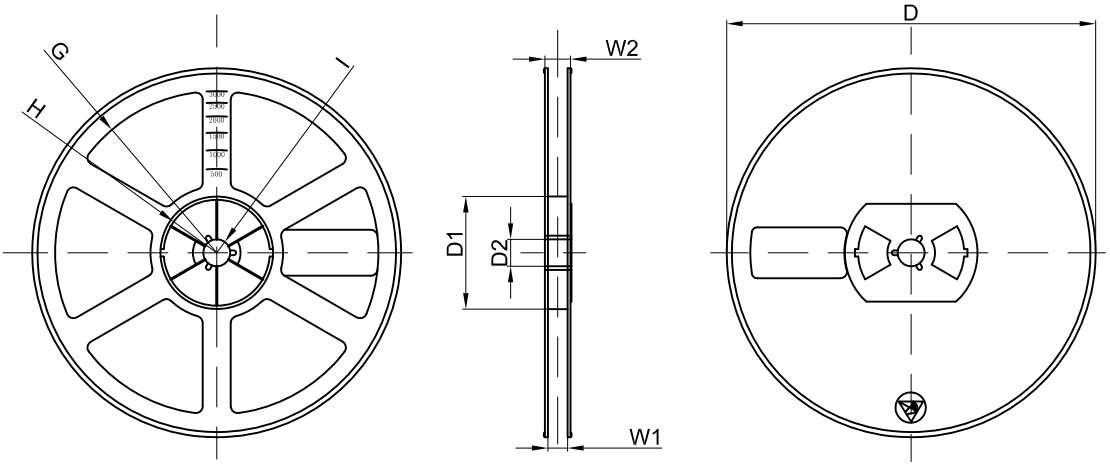


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

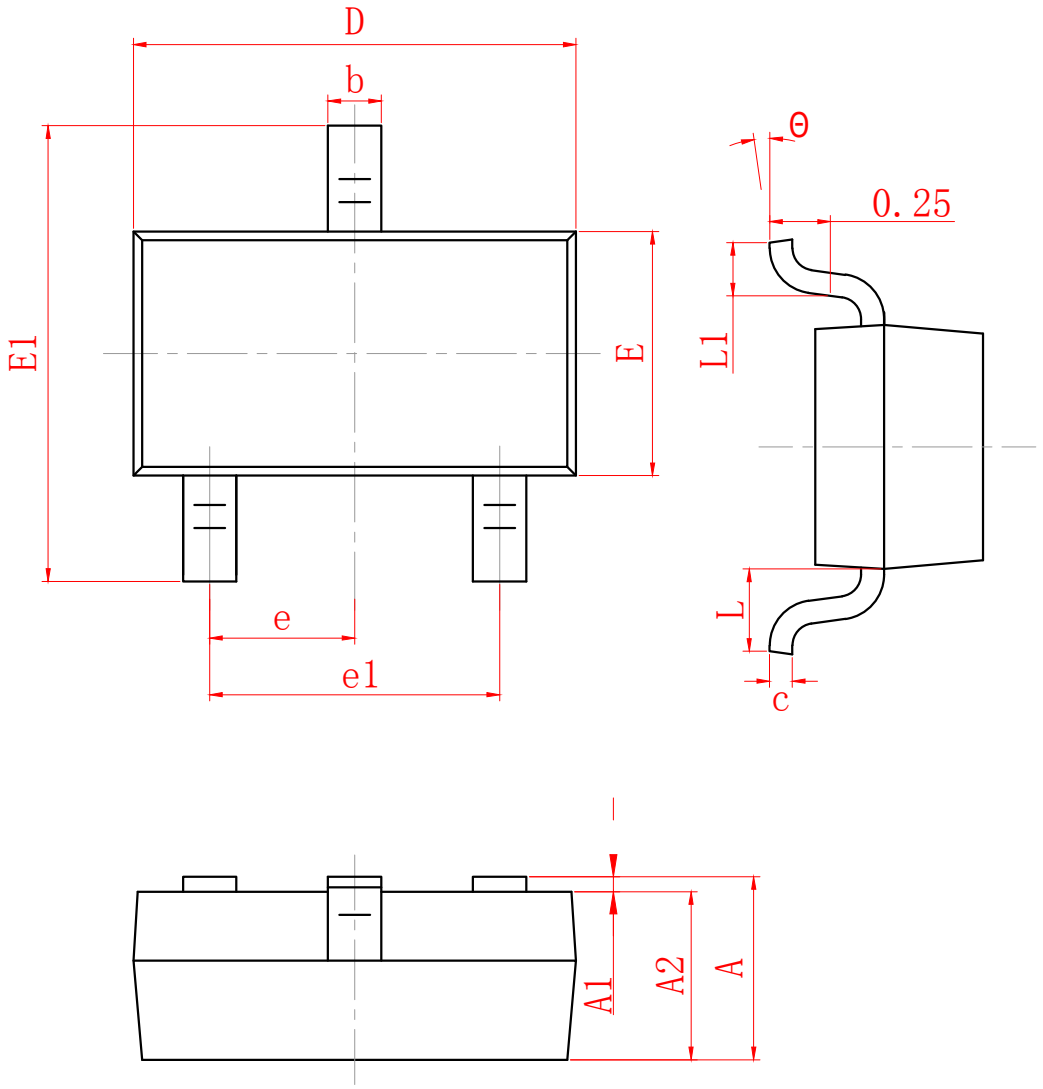


SOT-23 Reel



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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