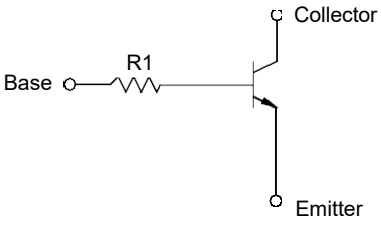
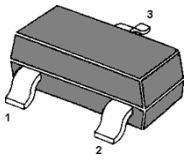
MMDTC343 NPN Silicon Epitaxial Planar Transistor

for switching and interface circuit and
drive circuit applications

Features

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process





1.Base 2.Emitter 3.Collector
SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

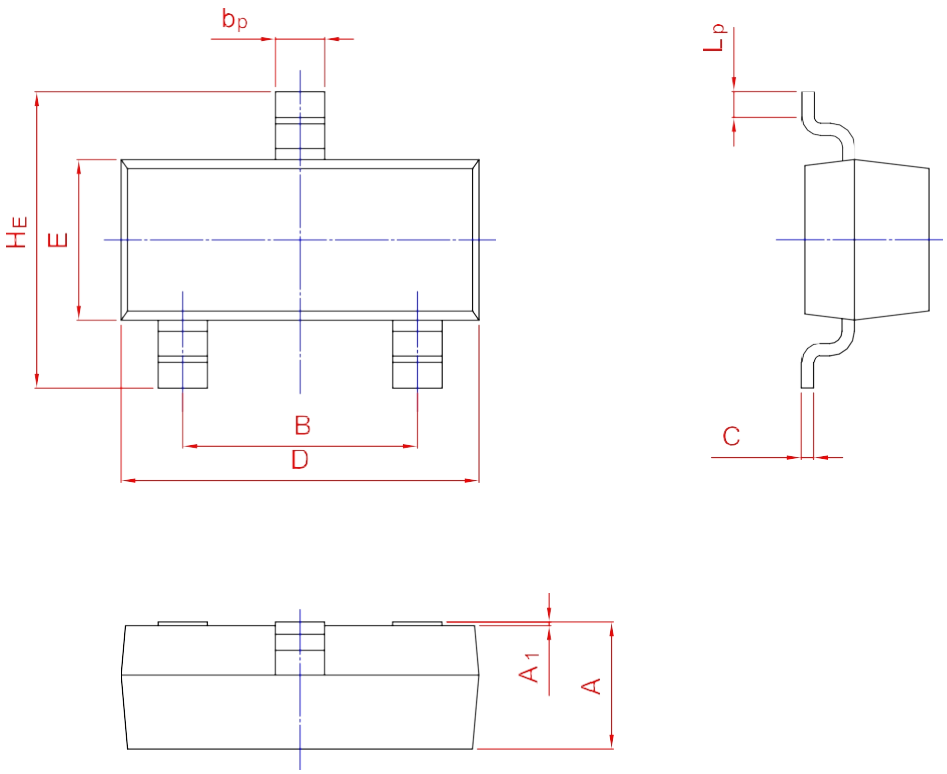
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	30	V
Collector Emitter Voltage	V_{CEO}	15	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	600	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 5 V, I_C = 50 mA	h_{FE}	100	-	600	-
Collector Base Cutoff Current at V_{CB} = 20 V	I_{CBO}	-	-	0.5	μA
Emitter Base Cutoff Current at V_{EB} = 4 V	I_{EBO}	-	-	0.5	μA
Collector Base Breakdown Voltage at I_C = 50 μA	$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA	$V_{(BR)CEO}$	15	-	-	V
Emitter Base Breakdown Voltage at I_E = 50 μA	$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at I_C = 50 mA, I_B = 2.5 mA	$V_{CE(sat)}$	-	-	0.3	V
Input Resistor	R_1	3.29	4.7	6.11	KΩ
Transition Frequency at V_{CE} = 10 V, $-I_E$ = 5 mA, f = 100 MHz	f_T	-	200	-	MHz

PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT-23**



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	0.95 1.40	2.04 1.78	0.50 0.35	0.19 0.08	2.70 3.10	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20