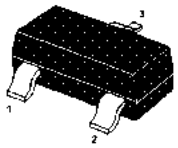
MMBT9015

PNP Silicon Epitaxial Planar Transistors

for switching and AF amplifier applications

As complementary types the NPN transistor MMBT9014 is recommended.



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

MAXIMUM RATINGS(T_a=25℃)

CHARACTERISTIC	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	-45	Vdc
Collector-Base Voltage	V_{CBO}	-50	Vdc
Emitter-Base Voltage	V_{EBO}	-5.0	Vdc
Collector Current—Continuous	I_C	-150	mAdc
Base Current	I_B	-30	mAdc

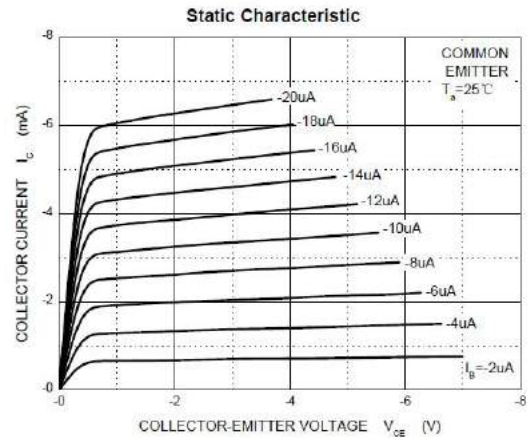
THERMAL CHARACTERISTICS

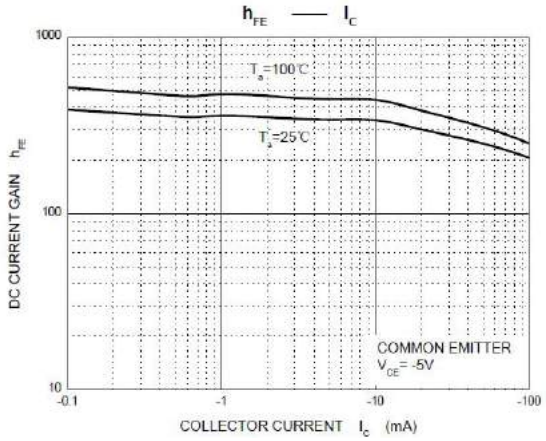
CHARACTERISTIC	Symbol	Max	Unit
Collector Power Dissipation	P_c	300	mW
Junction and Storage Temperature	T_j, T_{stg}	150 , -55 ~150	℃

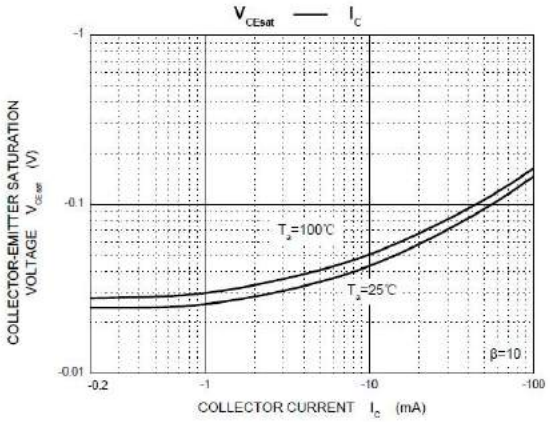
ELECTRICAL CHARACTERISTICS(T_A=25℃ unless otherwise noted)

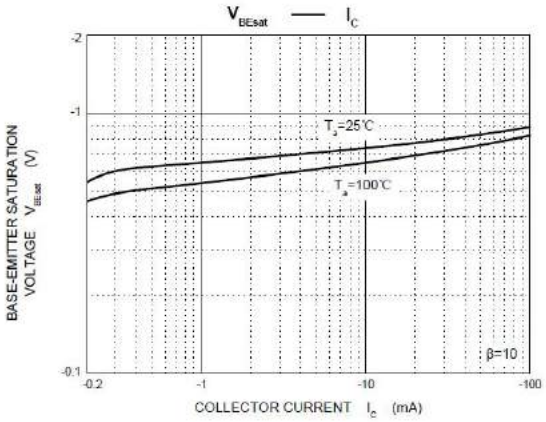
Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB}=-50V,I_E=0	—	—	-0.1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=-5V,I_C=0	—	—	-0.1	μA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=-100μA	-50	—	—	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=-1.0mA	-45	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-100μA	-5	—	—	V
DC Current Gain	h_{FE}	V_{CE}=-6V,I_C=-2mA	200	—	450	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-100mA,I_B=-5mA	—	—	0.6	V
Base-Emitter Voltage	V_{BE}	V_{CE}=-5.0V,I_C=-10mA	—	—	-0.82	V
Transition Frequency	f_T	V_{CE}=-5.0V,I_C=-10mA	100	200	—	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=-10V,I_E=0, f=1MHz	—	4.0	7.0	pF

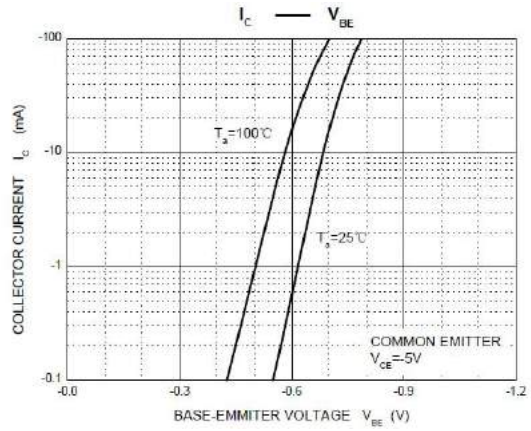
Typical Performance Characteristics

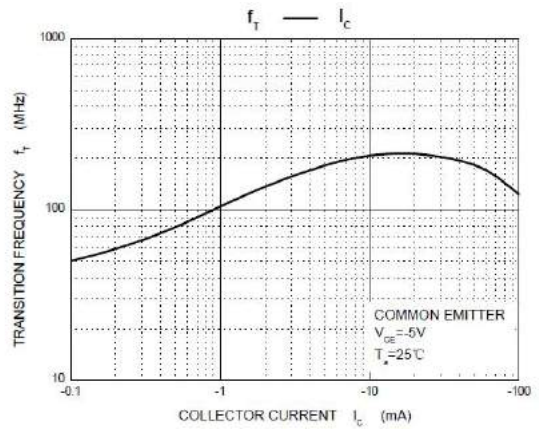


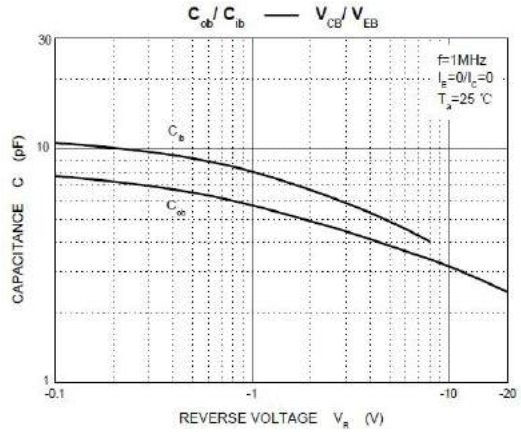


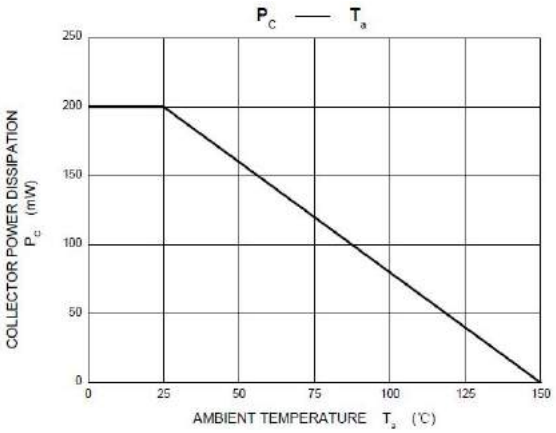




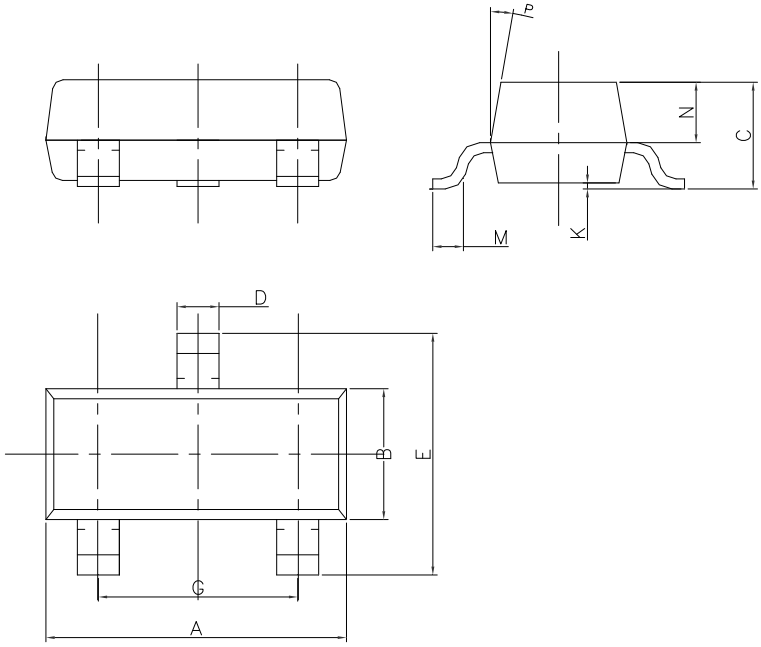






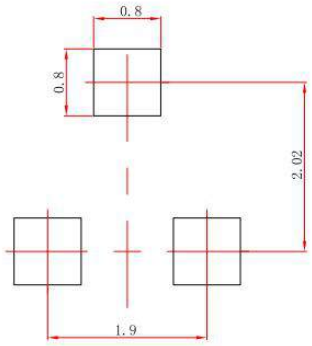


SOT-23 DIMENSION



DIM	MILLIMETERS
A	2.85~3.04
B	1.30±0.10
C	1.00±0.10
D	0.45±0.05
E	2.25~2.55
G	1.90±0.1
K	0.00−0.10
M	0.20 MIN
N	0.60±0.10
P	7±2°

SOT-23 Suggested Layout



Unit: mm±0.05mm