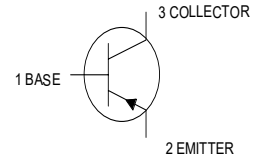
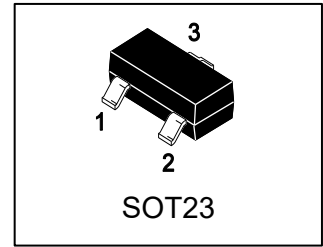


MBTA56

S-MBTA56

Driver Transistors PNP Silicon



1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
MBTA56	2GM	3000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector–Emitter Voltage	V _{CEO}	-80	V
Collector–Base Voltage	V _{CBO}	-80	V
Emitter–Base Voltage	V _{EBO}	-4	V
Collector Current — Continuous	I _C	-500	mA

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR-5 Board (Note 1) @ TA = 25°C Derate above 25°C	PD	225 1.8	mW mW/°C
Thermal Resistance, Junction–to–Ambient(Note 1)	R _{θJA}	556	°C/W
Junction and Storage temperature	T _J , T _{stg}	-55~+150	°C

1. FR-5 = 1.0×0.75×0.062 in.

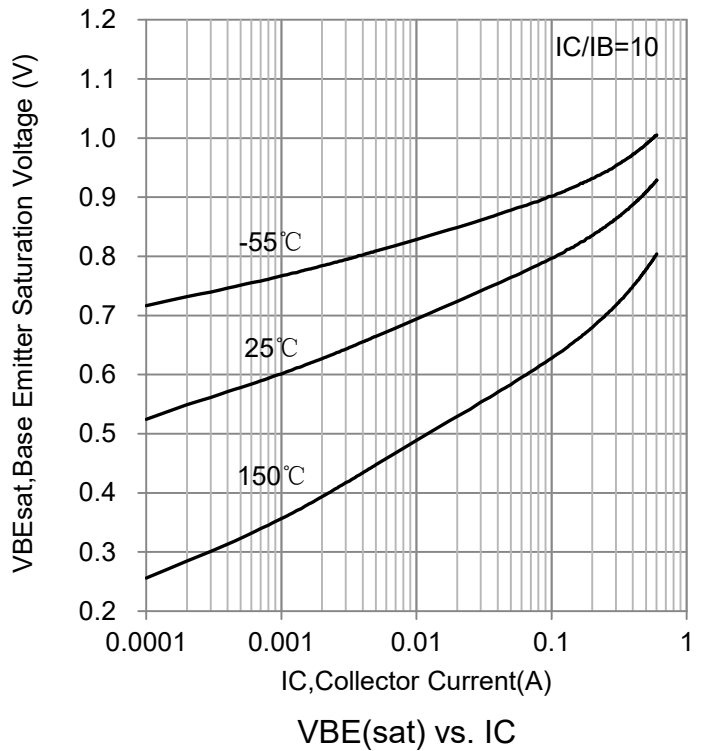
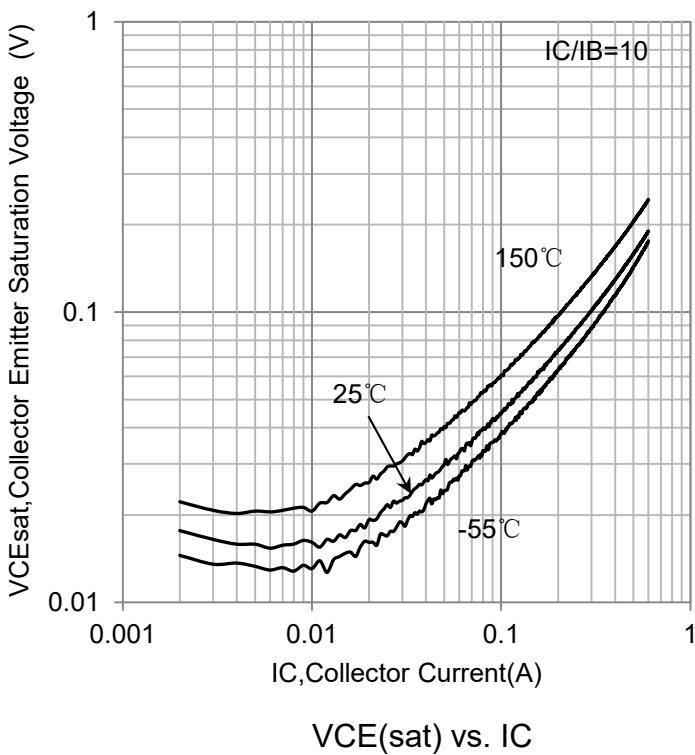
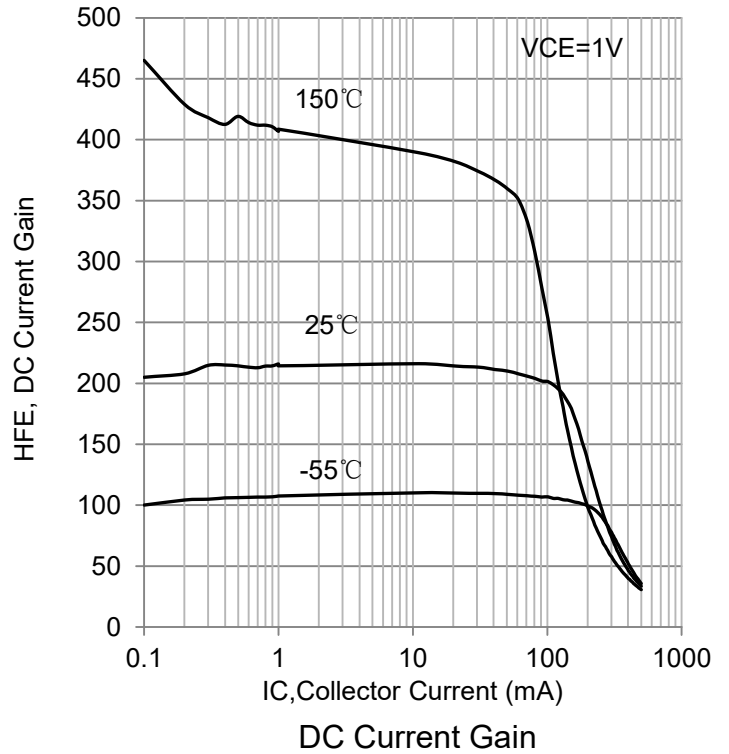
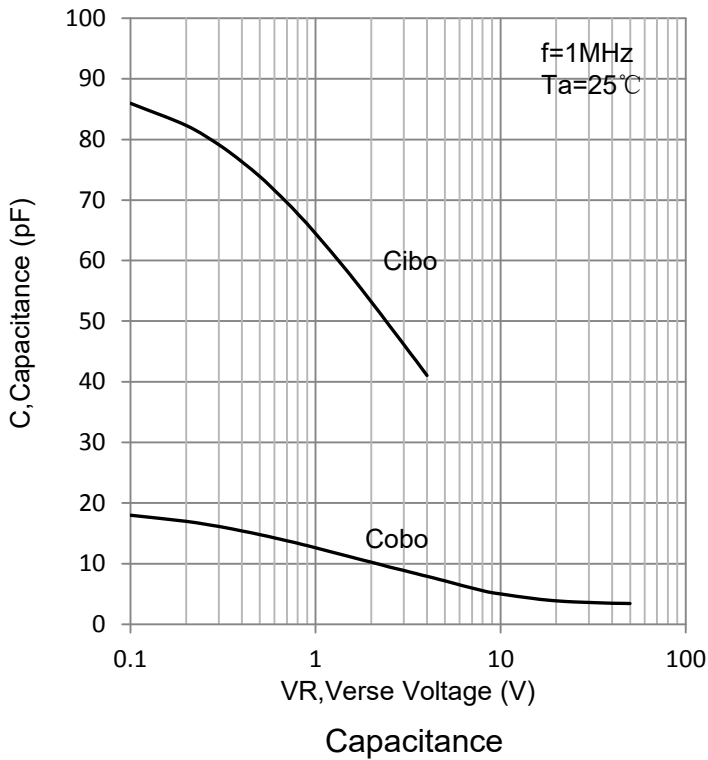


5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

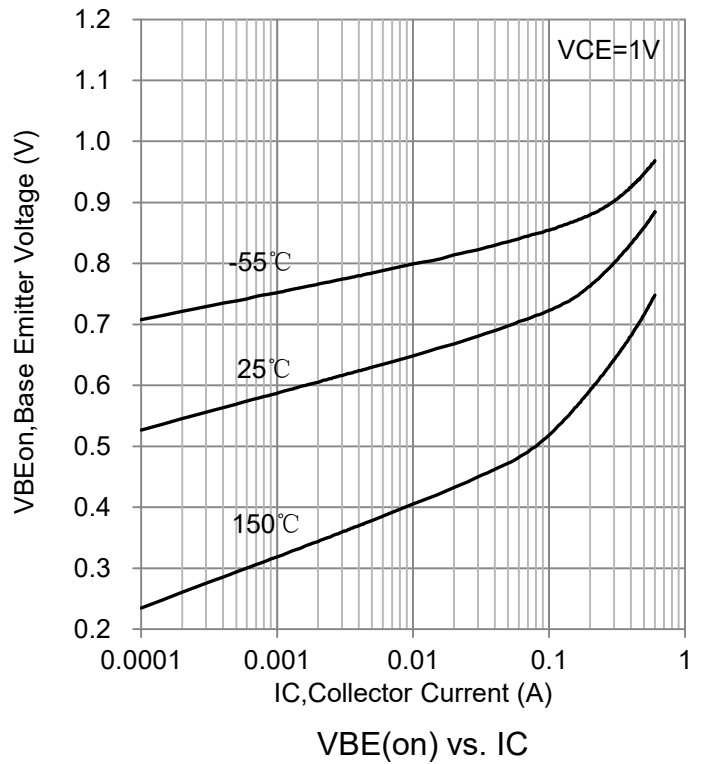
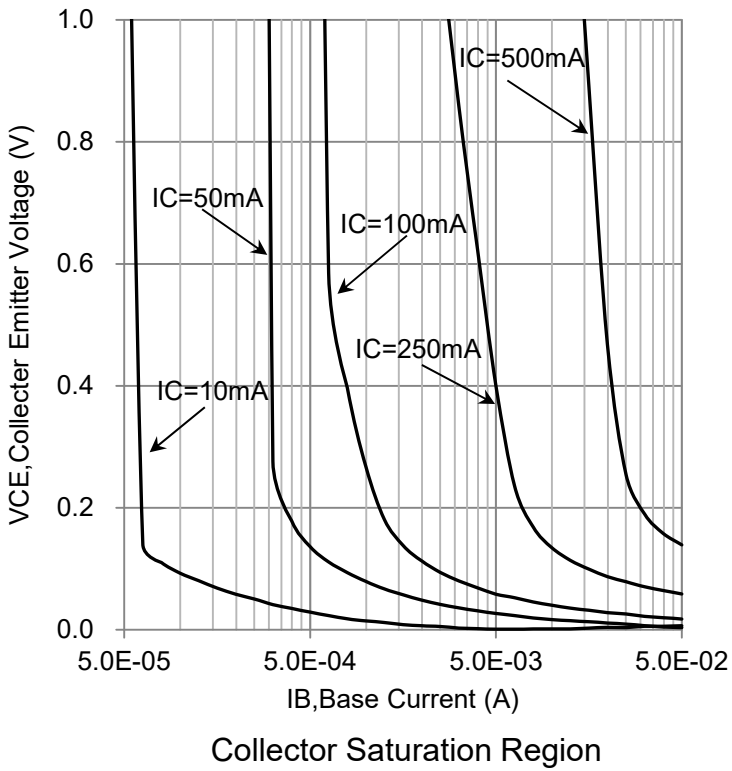
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage(Note 2) (IC = -1 mA, IB = 0)	VBR(CEO)	-80	-	-	V
Emitter–Base Breakdown Voltage (IE = -100 μA, IC = 0)	VBR(EBO)	-4	-	-	V
Collector–Base Breakdown Voltage (IC= -100μA, IE= 0)	VBR(CBO)	-80	-	-	V
Collector Cutoff Current (VCE = - 60 V, IE = 0)	ICES	-	-	-0.1	μA
Collector Cutoff Current (VCB = - 80 V, IE = 0)	ICBO	-	-	-100	nA
Emitter-Base cut-off current (IC = 0, VEB = -6V)	IEBO	-	-	-100	nA
Collector-Emitter cutoff Current (VCE = -80V, IB=0)	ICEO	-	-	-10	μA
DC Current Gain (IC = -10 mA, VCE = -1 V) (IC = -100 mA, VCE = -1 V)	HFE	100 100	- -	- -	
Collector–Emitter Saturation Voltage (IC = -100 mA, IB = -10 mA)	VCE(sat)	-	-	-0.25	V
Base-Emitter turn on voltage (IC = -100 mA, VCE = -1 V)	VBE(on)	-	-	-1.2	V
Current–Gain — Bandwidth Product (IC = -100mA, VCE= -1V, f = 100MHz)	fT	50	-	-	MHz
Output Capacitance (VCB=-10V,IE=0,f=1MHz)	Cobo	-	5.3	-	pF
Input Capacitance (VEB=-0.5V,IC=0,f=1MHz)	Cibo	-	78	-	pF

 2.Pulse Test: Pulse Width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 2.0\%$.


6. ELECTRICAL CHARACTERISTICS CURVES



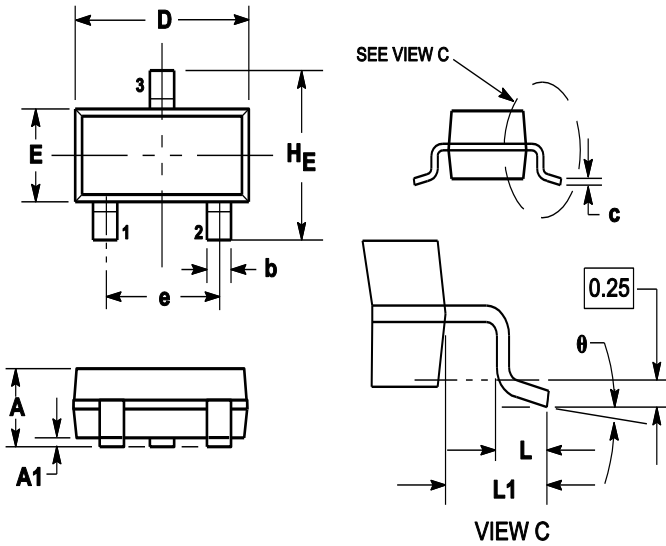
6. ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. OUTLINE AND DIMENSIONS

Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1	1.11	0.035	0.04	0.044
A1	0.01	0.06	0.1	0.001	0.002	0.004
b	0.37	0.44	0.5	0.015	0.018	0.02
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.9	3.04	0.11	0.114	0.12
E	1.20	1.3	1.4	0.047	0.051	0.055
e	1.78	1.9	2.04	0.07	0.075	0.081
L	0.10	0.2	0.3	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.4	2.64	0.083	0.094	0.104
θ	0°	---	10°	0°	---	10°

8. SOLDERING FOOTPRINT
