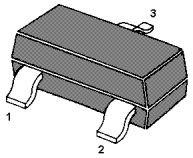
MMBT8550(1.5A)

PNP Silicon Epitaxial Planar Transistor

For switching and amplifier applications. Especially suitable for AF-driver stages and low power output stages.

As complementary type the NPN transistor MMBT8050 (1.5A) is recommended.



1.Base 2.Emitter 3.Collector

TO-236 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	40	V
Collector Emitter Voltage	$-V_{CEO}$	25	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	1.5	A
Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{Stg}	- 55 to + 150	°C

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient [1)]	$R_{\theta JA}$	357	℃/W

[1)] Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-V_{CE}$ = 1 V, $-I_C$ = 100 mA	MMBT8550C	h_{FE}	100	250	-
	MMBT8550D	h_{FE}	160	400	-
at $-V_{CE}$ = 1 V, $-I_C$ = 800 mA		h_{FE}	40	-	-
Collector Base Cutoff Current at $-V_{CB}$ = 35 V		$-I_{CBO}$	-	100	nA
Emitter Base Cutoff Current at $-V_{EB}$ = 6 V		$-I_{EBO}$	-	100	nA
Collector Base Breakdown Voltage at $-I_C$ = 100 µA		$-V_{(BR)CBO}$	40	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 2 mA		$-V_{(BR)CEO}$	25	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 100 µA		$-V_{(BR)EBO}$	6	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 800 mA, $-I_B$ = 80 mA		$-V_{CE(sat)}$	-	0.5	V
Base Emitter Saturation Voltage at $-I_C$ = 800 mA, $-I_B$ = 80 mA		$-V_{BE(sat)}$	-	1.2	V
Base Emitter Voltage at $-V_{CE}$ = 1 V, $-I_C$ = 10 mA		$-V_{BE(on)}$	-	1	V
Gain Bandwidth Product at $-V_{CE}$ = 10 V, $-I_C$ = 50 mA		f_T	120	-	MHz

Electrical Characteristics Curves

Fig. 1 Output Characteristics Curve

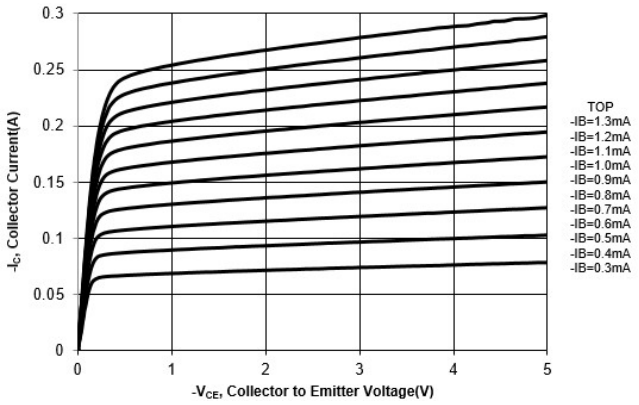


Fig. 2 Output Characteristics Curve

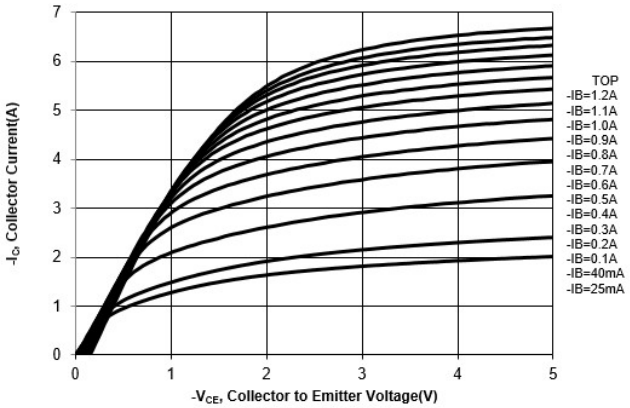


Fig. 3 Collector Current vs. Base to Emitter Voltage

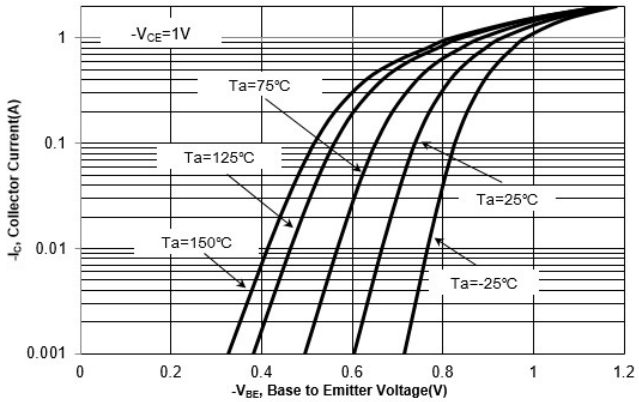
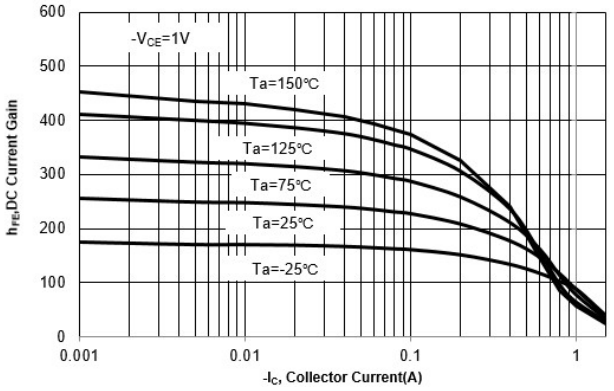


Fig. 4 DC Current Gain vs. Collector Current



Electrical Charac teristics Curves

Fig. 5 V_{BESAT} vs. Collector Current

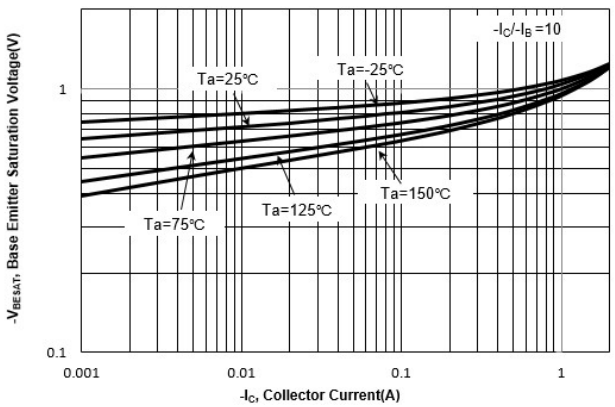


Fig. 6 V_{CESAT} vs. Collector Current

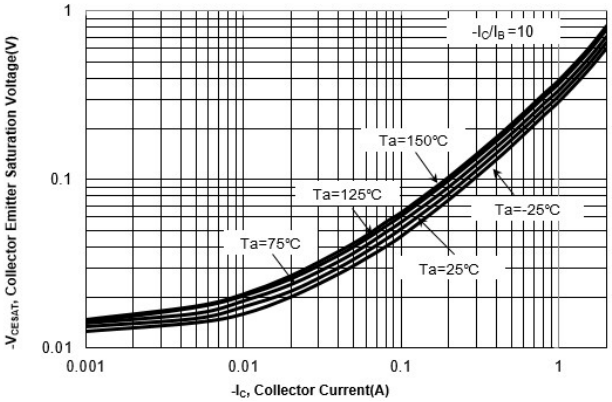


Fig. 7 Output Capacitance

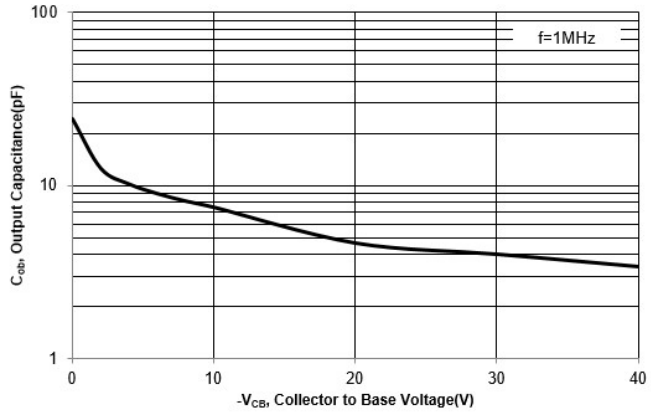
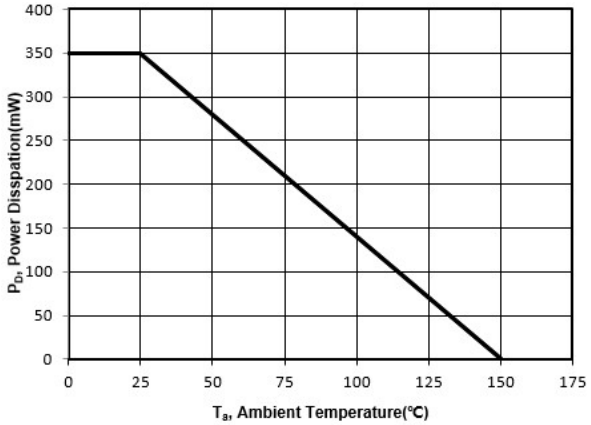
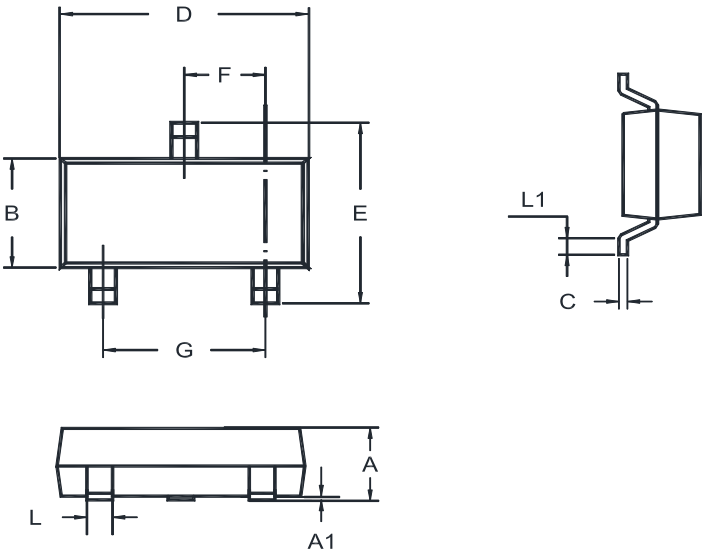


Fig. 8 Power Derating Curve



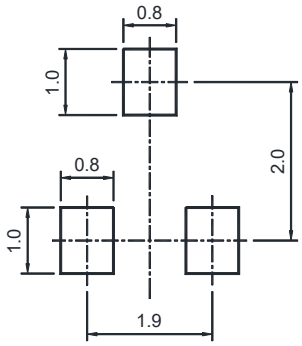
MMBT8550(1.5A)

Package Outline (Dimensions in mm) TO-236



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20 0.89	0.100 0.013	1.40 1.20	0.19 0.08	3.04 2.80	2.6 2.2	1.02 0.89	2.04 1.78	0.51 0.37	0.2 MIN

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
TO-236	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" ** " = Part No.

MMBT8550C(1.5A):Y3

MMBT8550D(1.5A):Y4

" YM " = Date Code Marking

" Y " = Year

" M " = Month

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