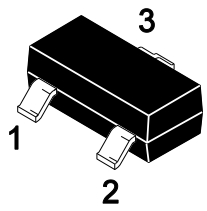
MMBTSA1037
PNP Transistor

Features

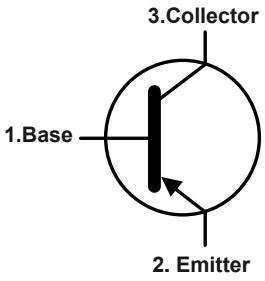
- For Switching and AF Amplifier Applications.

SOT-23



1.Base 2.Emitter 3.Collector

Equivalent Circuit



Marking Code :
MMBTSA1037Q : FQ
MMBTSA1037R : FR
MMBTSA1037S : FS

Absolute Maximum Ratings

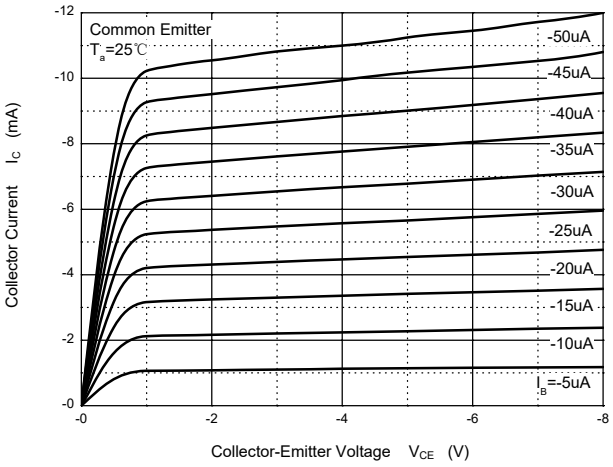
Ratings at 25℃ ambient temperature unless otherwise specified.

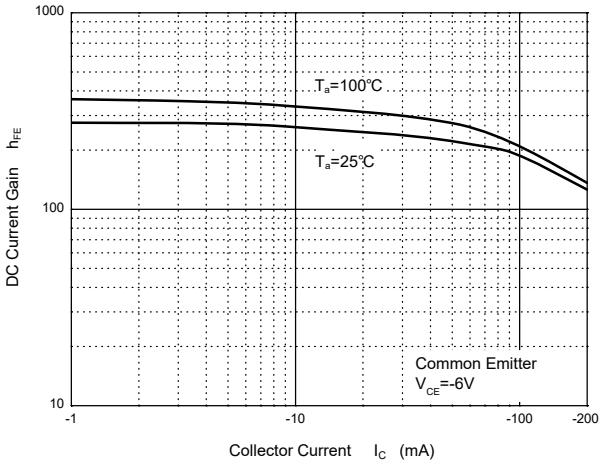
Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	150	mA
Maximum Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃

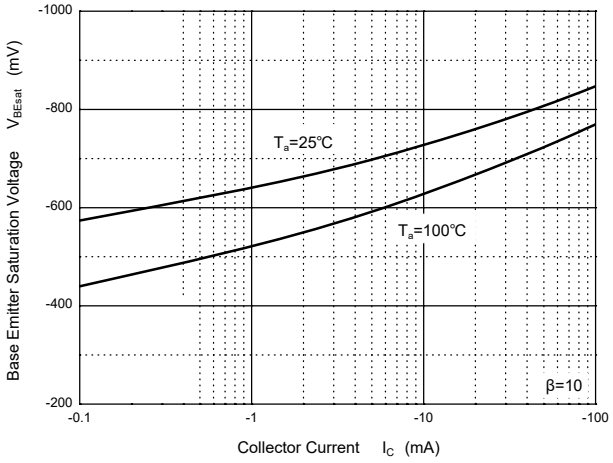
Electrical Characteristics (T_A=25℃)

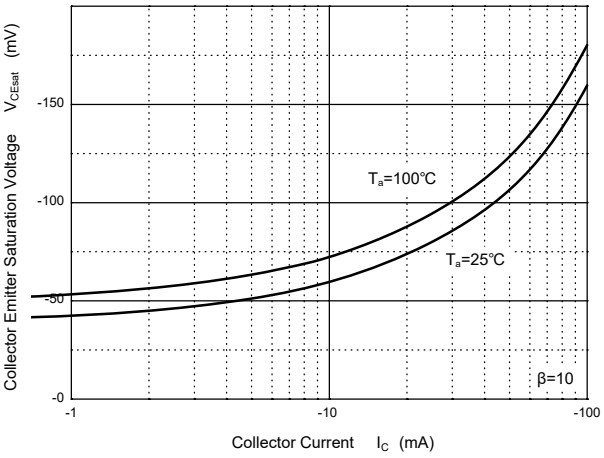
Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = -6 V, I_C = -1 mA	Gain Group	Q R S	H_{FE}	120 180 270	-- -- --	270 390 560	--
Collector Base Cutoff Current at V_{CB} = -60 V			$-I_{CBO}$	--	--	100	nA
Emitter Base Cutoff Current at V_{EB} = -6 V			$-I_{EBO}$	--	--	100	nA
Collector Base Breakdown Voltage at I_C = -50 μA			$-V_{(BR)CBO}$	60	--	--	V
Collector Emitter Breakdown Voltage at I_C = -1 mA			$-V_{(BR)CEO}$	50	--	--	V
Emitter Base Breakdown Voltage at I_E = -50 μA			$-V_{(BR)EBO}$	6	--	--	V
Collector Emitter Saturation Voltage at I_C = -50 mA, I_B = -5 mA			$-V_{CE(sat)}$	--	--	0.5	V
Base Emitter Saturation Voltage at I_C = -50 mA, I_B = -5 mA			$-V_{BE(sat)}$	--	--	1	V
Transition Frequency at V_{CE} = -12 V, I_C = -2 mA, f = 30 MHz			F_T	--	140	--	MHz
Output Capacitance at V_{CB} = -12 V, f = 1 MHz			C_{ob}	--	4	5	pF

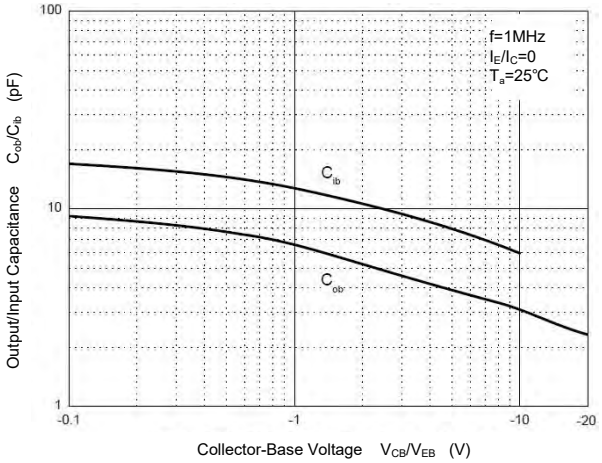
Typical Characteristic Curves

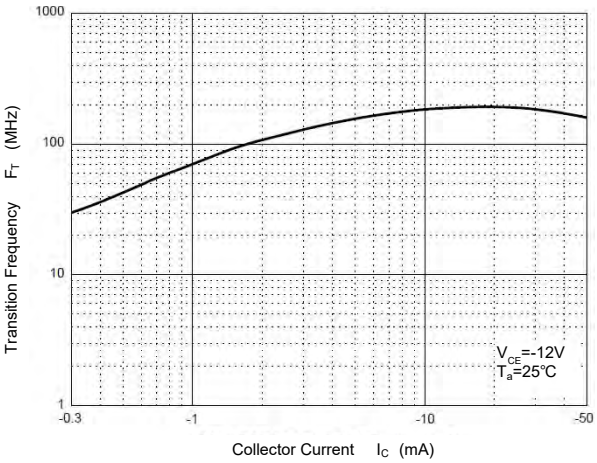






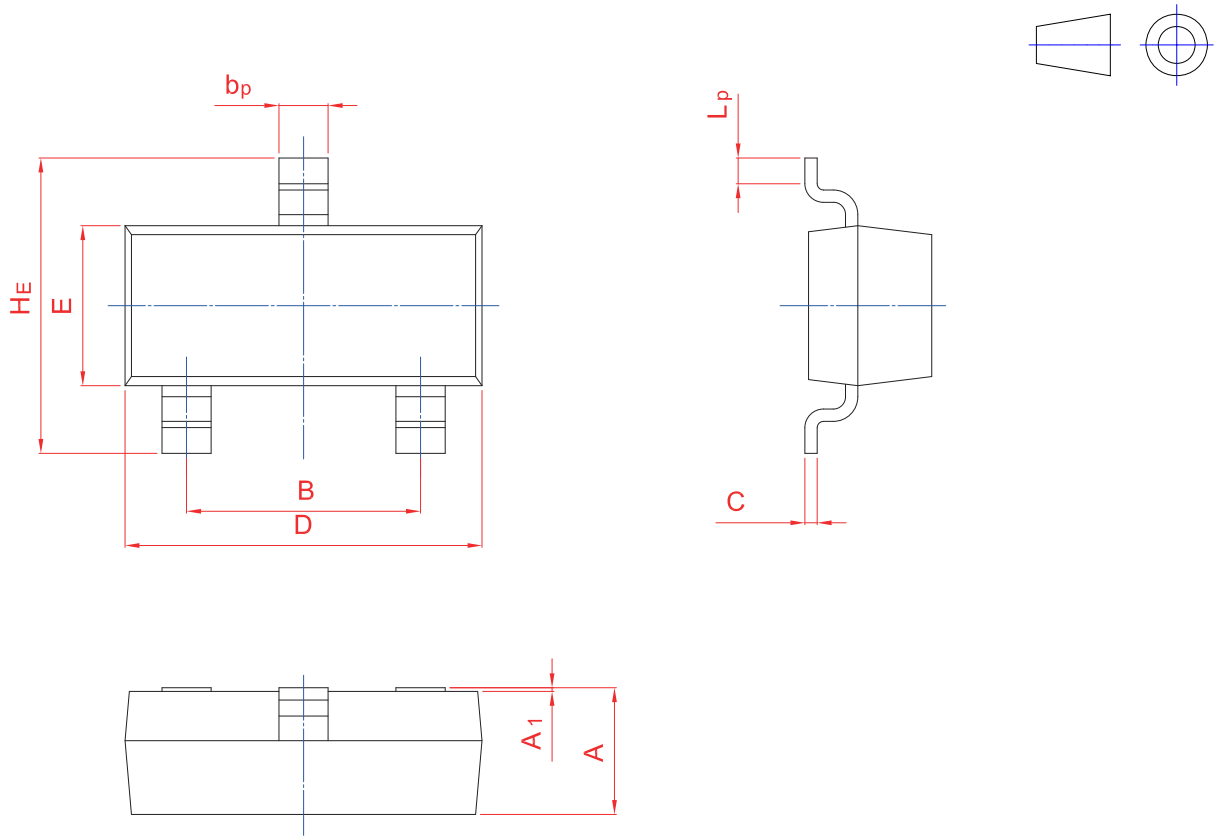






Package Outline

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.89	2.04 1.78	0.51 0.30	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20