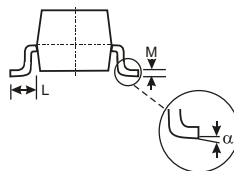
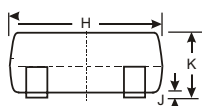
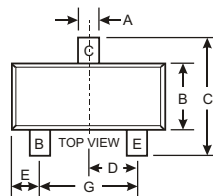


Features

- High voltage and high current : $V_{CEO}=50V$.
- PNP complement:MMBTSA1162
- Pb-Free Package is available.

Maximum Ratings @ $T_A = 25^\circ C$ 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}	5	V
Collector Current	I_C	150	mA
Power Dissipation	P_{tot}	150	mW
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature Range	T_{Stg}	- 55 to + 150	$^\circ C$



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

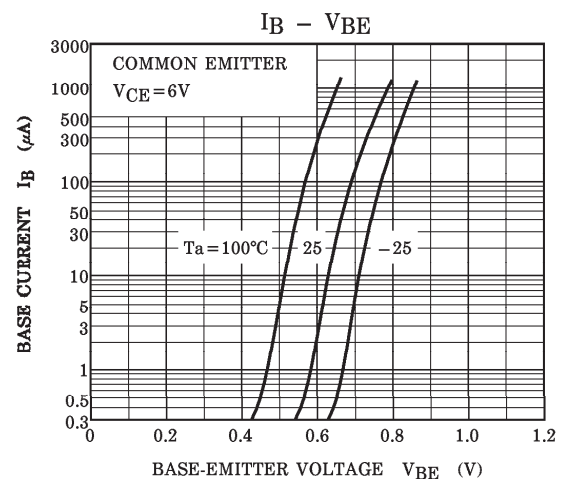
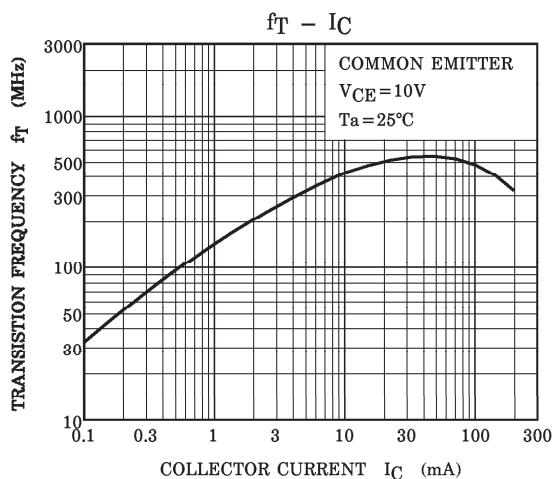
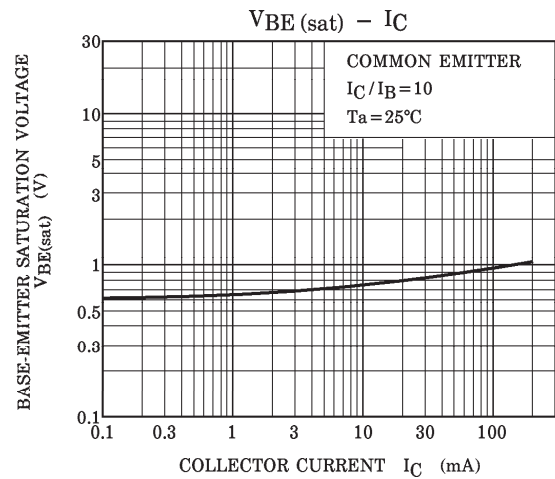
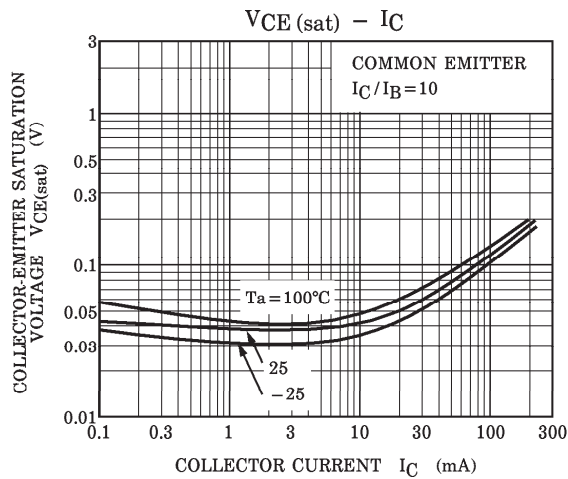
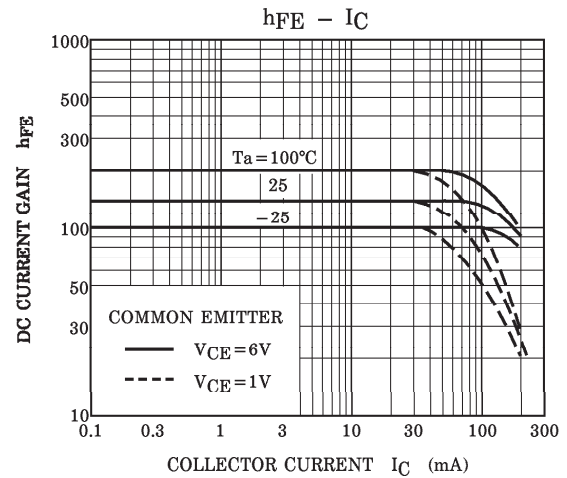
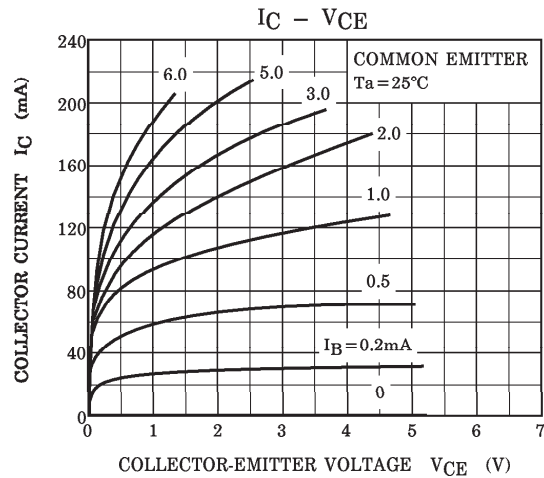
Electrical Characteristics @ $T_A = 25^\circ C$ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA, I_B = 0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu A, I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 60V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 6V, I_C = 2mA$	70		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 10mA$		0.1	0.25	V
Transition frequency	f_T	$V_{CE} = 10V, I_C = 1mA$	80			MHz
Output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		2.0	3.5	pF
Noise Figure	NF	$V_{CE} = 6V, I_C = 0.1mA, f = 1kHz, R_g = 10k\Omega$		1.0	10	dB

CLASSIFICATION OF h_{FE}

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LG	LL

TYPICAL TRANSIENT CHARACTERISTICS



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