

SOT-23


1. BASE
2. EMITTER
3. COLLECTOR

MARKING: 1AM
Features

- As complementary type the PNP transistor MMBT3906 is recommended
- Epitaxial planar die construction

Maximum Ratings

(Ratings at 25°C ambient temperature unless otherwise specified.)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	200	mA
P_C	Total Device Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	625	°C/W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 to +150	°C

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

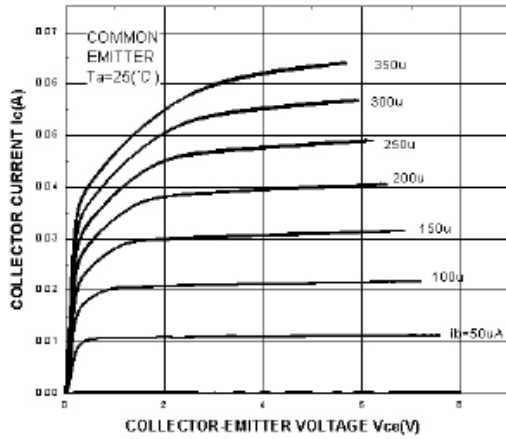
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	V_{CBO}	$I_C=10\mu A, I_E=0$	60		V
Collector-emitter breakdown voltage	V_{CEO}	$I_C=1mA, I_B=0$	40		V
Emitter-base breakdown voltage	V_{EBO}	$I_E=10\mu A, I_C=0$	6		V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$		0.1	μA
Collector cut-off current	I_{CEX}	$V_{CE}=30V, V_{BE(off)}=3V$		50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$		0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=10mA$	100	400	
	$h_{FE(2)}$	$V_{CE}=1V, I_C=50mA$	60		
	$h_{FE(3)}$	$V_{CE}=1V, I_C=100mA$	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$		0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=50mA, I_B=5mA$		0.95	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA, f=100MHz$	300		MHz
Delay Time	t_d	$V_{CC}=3V, V_{BE}=-0.5V$		35	nS
Rise Time	t_r	$I_C=10mA, I_{B1}=-I_{B2}=1.0mA$		35	nS
Storage Time	t_s	$V_{CC}=3V, I_C=10mA,$		200	nS
Fall Time	t_f	$I_{B1}=-I_{B2}=1mA$		50	nS

CLASSIFICATION OF $h_{FE(1)}$

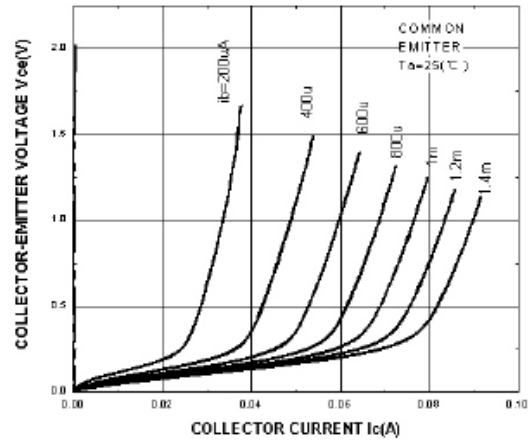
Rank	O	Y	G
Range	100-200	200-300	300-400

Typical Characteristics

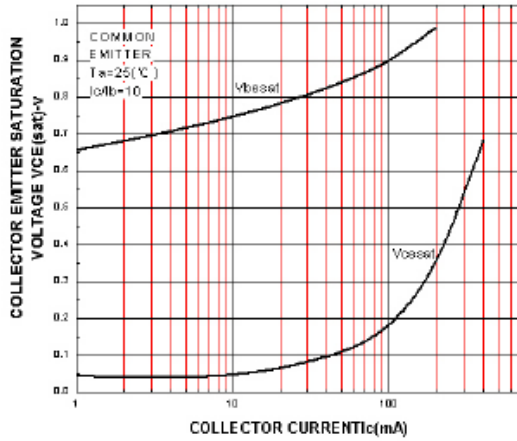
Ic-Vce



Vce-Ic



Vcesat-Ic
Vbesat-Ic



hFE-Ic

