

FEATURES

As complementary type the PNP transistor MMBT3904 is recommended
Epitaxial planar die construction

MARKING: 2A

MAXIMUM RATINGS (TA=25°C unless otherwise noted)

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

MMBT3906 (NPN)


ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C=10\mu A, I_E=0$	-40		v
Collector-emitter breakdown voltage	V_{CEO}	$I_C=1mA, I_B=0$	-40		v
Emitter-base breakdown voltage	V_{EBO}	$I_E=10\mu A, I_C=0$	-5		v
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$		-0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=30V, V_{BE(off)}=3V$		50	μA
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	300	
DC current gain	$h_{FE(2)}$	$V_{CE}=1V, I_C=100mA$	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_E=5mA$		-0.4	v
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=50mA, I_B=5mA$		-0.95	v
Transition frequency	fT	$V_{CE}=20V, I_C=10mA, f=100MHz$	300		MHz
Delay Time	td	$V_{CC}=3V, V_{BE}=-0.5V$		35	nS
Rise Time	tr	$I_C=10mA, I_{B1}=-I_{B2}=1.0mA$		35	nS
Storage Time	ts	$V_{CC}=3V, I_C=10mA,$		225	nS
Fall Time	tf	$I_{B1}=-I_{B2}=1mA$		75	nS

CLASSIFICATION OF

Rank	O	Y	
Range	120-200	200-300	

MMBT3906 Typical Characteristics

