



Dual PNP TRANSISTOR

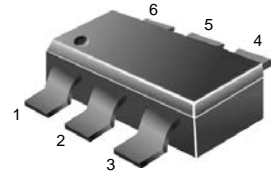
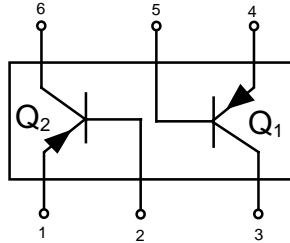


FEATURES

- Epitaxial planar die construction
- Ideal for low power amplification and switching

MARKING:A2

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



SOT-363/SC-88
CASE 419B STYLE 1

Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	-40	V
V _{CEO}	Collector-Emitter Voltage	-40	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-0.2	A
P _C	Collector Power Dissipation	0.2	W
R _{θJA}	Thermal Resistance. Junction to Ambient Air	625	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS(T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0	-40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-40			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-10μA, I _C =0	-5			V
Collector cut-off current	I _{CEX}	V _{CE} =-30V, V _{EB(OFF)} =-3V			-50	nA
Base cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0			-50	nA
DC current gain	h _{FE(1)}	V _{CE} =-1V, I _C =-0.1mA	60			
	h _{FE(2)}	V _{CE} =-1V, I _C =-1mA	80			
	h _{FE(3)}	V _{CE} =-1V, I _C =-10mA	100		300	
	h _{FE(4)}	V _{CE} =-1V, I _C =-50mA	60			
	h _{FE(5)}	V _{CE} =-1V, I _C =-100mA	30			
Collector-emitter saturation voltage	V _{CE(sat)1}	I _C =-10mA, I _B =-1mA			-0.25	V
	V _{CE(sat)2}	I _C =-50mA, I _B =-5mA			-0.4	V
Base-emitter saturation voltage	V _{BE(sat)1}	I _C =-10mA, I _B =-1mA	-0.65		-0.85	V
	V _{BE(sat)2}	I _C =-50mA, I _B =-5mA			-0.95	V
Transition frequency	f _T	V _{CE} =-20V, I _C =-10mA, f=100MHz	250			MHz
Collector output capacitance	C _{ob}	V _{CB} =-5V, I _E =0, f=1MHz			4.5	pF
Noise figure	NF	V _{CE} =-5V, I _C =-0.1mA, f=1kHz, R _g =1KΩ			4	dB
Delay time	t _d	V _{CC} =-3V, V _{BE} =0.5V			35	nS
Rise time	t _r	I _C =-10mA, I _{B1} =-I _{B2} =-1mA			35	nS
Storage time	t _s	V _{CC} =-3V, I _C =-10mA			225	nS
Fall time	t _f	I _{B1} =-I _{B2} =-1mA			75	nS

DEVICE CHARACTERISTICS

MMBT3906DW

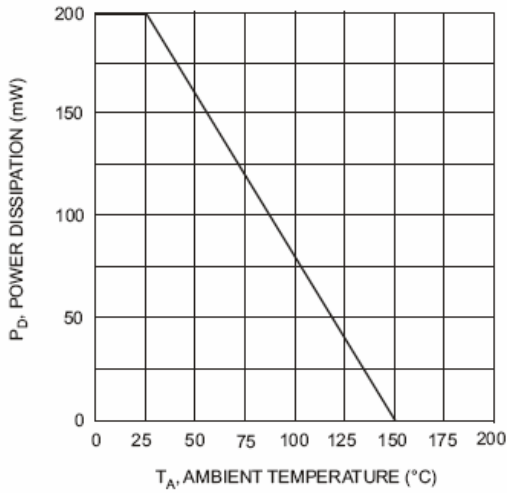


Fig. 1, Max Power Dissipation vs Ambient Temperature

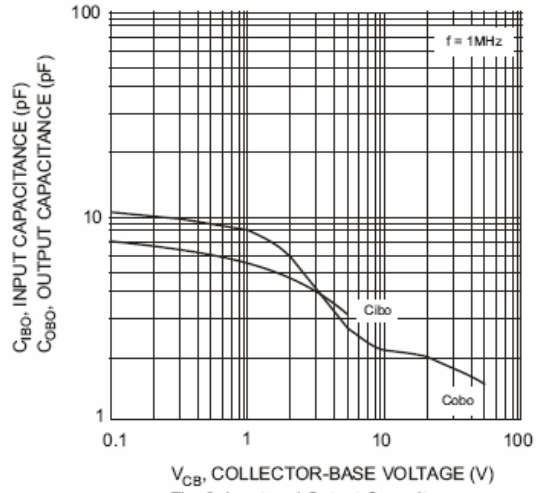


Fig. 2, Input and Output Capacitance vs. Collector-Base Voltage

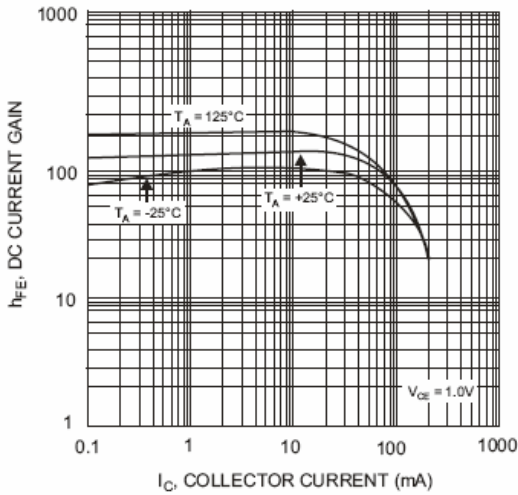


Fig. 3, Typical DC Current Gain vs Collector Current

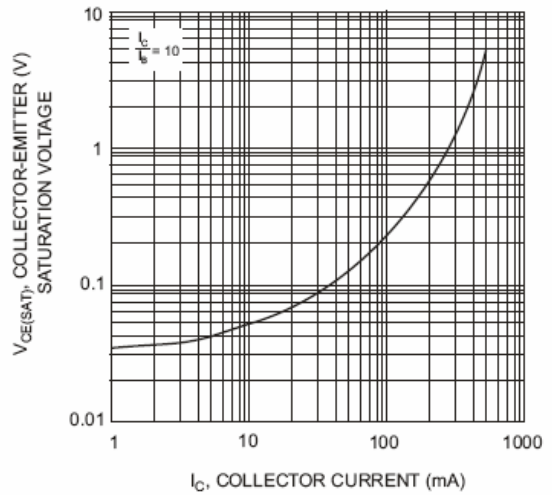


Fig. 4, Typical Collector-Emitter Saturation Voltage vs. Collector Current

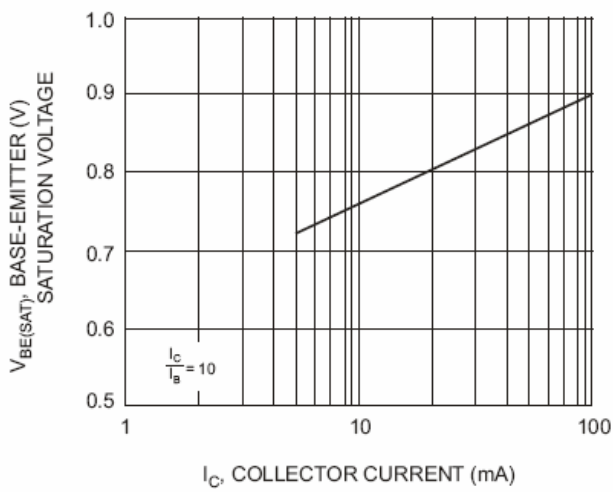
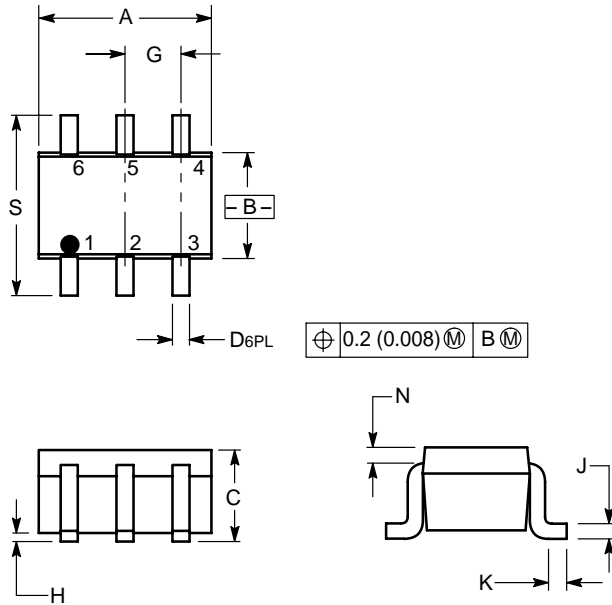


Fig. 5, Typical Base-Emitter Saturation Voltage vs. Collector Current

PACKAGE OUTLINE & DIMENSIONS

MMBT3906DW

SC-88/SOT-363



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026 BSC		0.65 BSC	
H	---	0.004	---	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20

- PIN 1. EMITTER 1
 2. BASE 1
 3. COLLECTOR 2
 4. EMITTER 2
 5. BASE 2
 6. COLLECTOR 1

