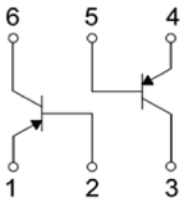
TL-MMDT3906V

SOT-563 DUAL TRANSISTOR (PNP+PNP)

Features

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

SOT-563



Equivalent Circuit

Absolute Maximum Ratings(T_A=25℃)

Symbol	Parameter	Value	Uniat
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	-0.2	A
P_C	Collector Power Dissipation	150	mW
T_J,T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ +150	℃

Electrical Characteristics (T_A=25℃ unless otherwise specified)

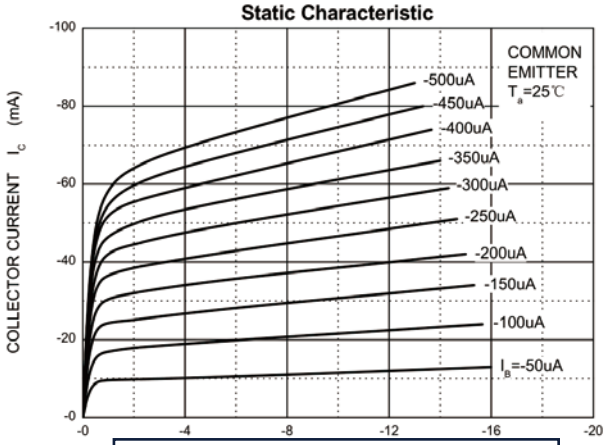
Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=-10μA, I_E=0	-40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=-1mA, I_B=0	-40			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=-10μA, I_C=0	-5			V
I_{CBO}	Collector cut-off current	V_{CB}=-30V, I_E=0			-0.05	μA
I_{EBO}	Emitter cut-off current	V_{EB}=-5V,I_C=0			-0.05	μA
I_{CEX}	Collector cut-off current	V_{CE}=-30V,$V_{EB(off)}$=-3V			-0.05	μA
$h_{FE(1)}$	DC current gain	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	
$V_{CE(sat)1}$	Collector-emitter saturation voltage	I_C=-10mA, I_B=-1mA			-0.25	V
$V_{CE(sat)2}$		I_C=-50mA, I_B=-5mA			-0.4	V
$V_{BE(sat)1}$	Base-emitter saturation voltage	I_C=-10mA, I_B=-1mA	-0.65		-0.85	V
$V_{BE(sat)2}$		I_C=-50mA, I_B=-5mA			-0.95	V
f_T	Transition frequency	V_{CE}=-20V,I_C=-10mA ,f=100MHz	250			MHz
C_{ob}	Collector Output capacitance	V_{CB}=-5V, I_E=0, f=1MHz			4.5	pF
C_{ib}	Collector input capacitaDce	V_{EB}=-0.5V,I_C=0,f=1MHZ			10	pF
t_d	Delay time	V_{CC}=-3V, $V_{BE(off)}$=-0.5V I_C=-10mA , I_{B1}=-I_{B2}= 1mA			35	nS
t_r	Rise time				35	nS
t_s	Storage time	V_{CC}=-3V,I_C=-10mA $_{B1}$=- I_{B2}=-1mA			225	nS
t_f	Fall time				75	nS

Ordering information

Product ID	Pack	Naming rule	Marking	hFE(1)	Qty(PCS)
MMDT3906V	SOT-563	MMDT3906V 产品名称 product name	KAR	100-300	3000

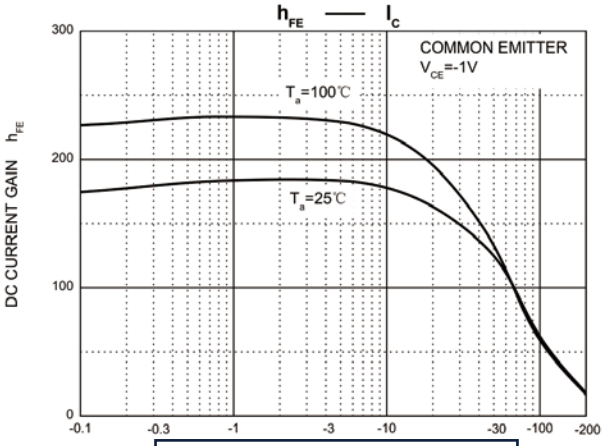
Typical Characteristics

Static Characteristic



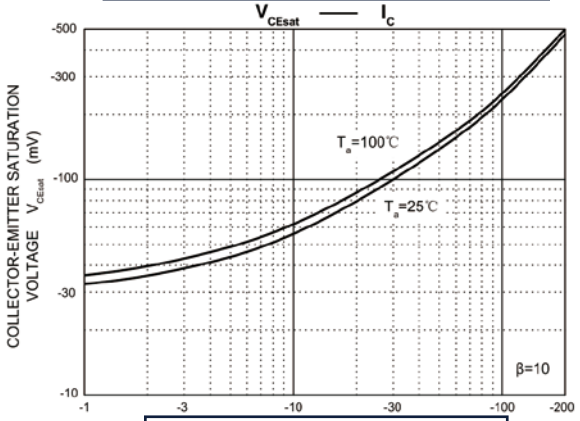
COLLECTOR-EMITTER VOLTAGE V_{CE}(V)

h_{FE} — I_C



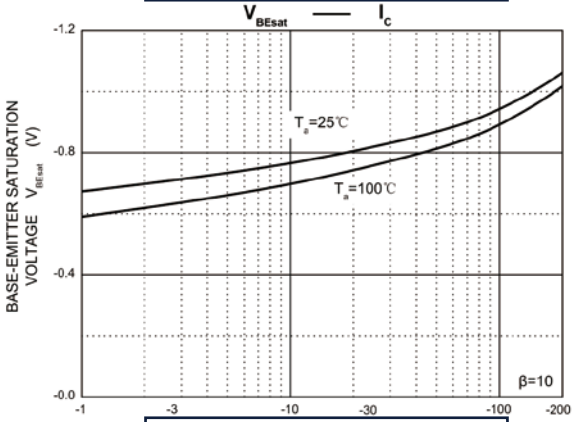
COLLECTOR CURRENT I_C(mA)

V_{CEsat} — I_C



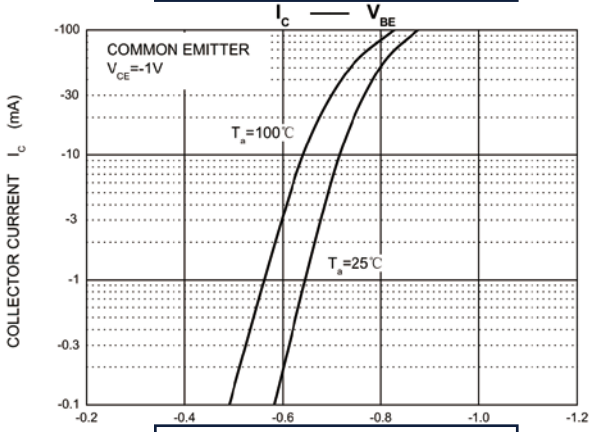
COLLECTOR CURRENT I_C(mA)

V_{BEsat} — I_C



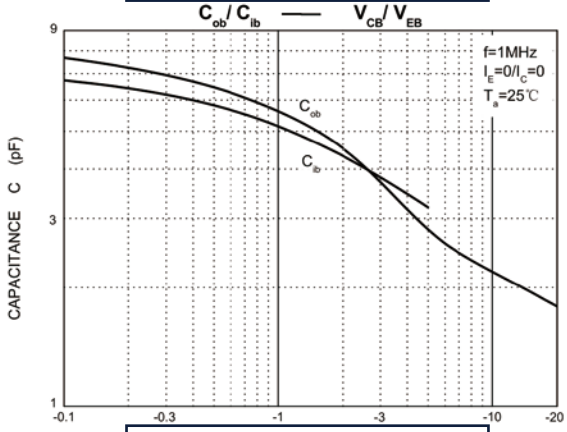
COLLECTOR CURRENT I_C(mA)

I_C — V_{BE}



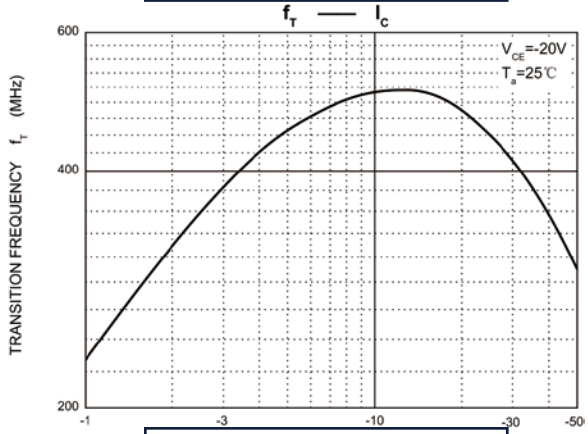
BASE-EMMITER VOLTAGE V_{BE}(V)

C_{ob} / C_{ib} — V_{CB} / V_{EB}



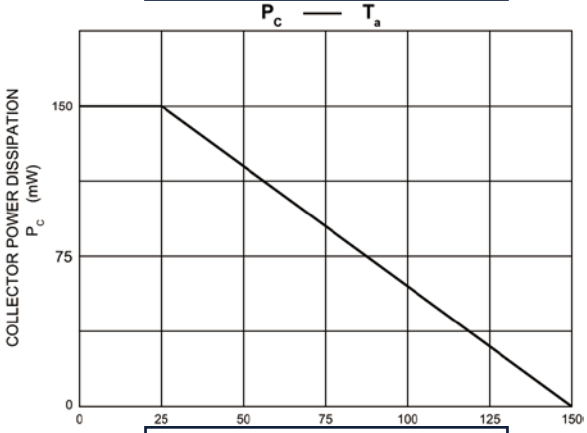
REVERSE VOLTAGEW V(V)

f_T — I_C



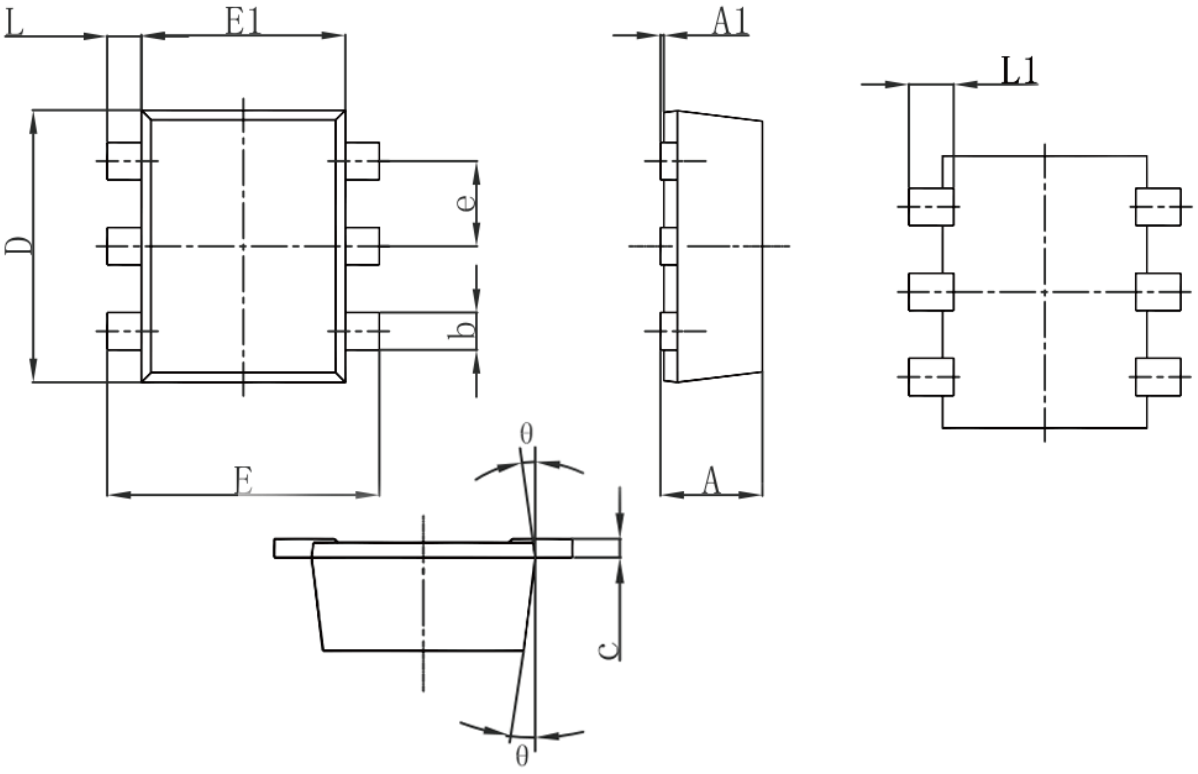
COLLECTOR CURRENT I_C(mA)

P_C — T_a



AMBIENT TEMPERATURE Ta(°C)

SOT-563 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.06
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	10° REF.		10° REF.	