

MMDT3906 Multi-Chip TRANSISTOR (PNP)

FEATURES

Power dissipation

P_{CM} : 0.2 W ($T_{amb}=25^{\circ}C$)

Collector current

I_{CM} : -0.2 A

Collector-base voltage

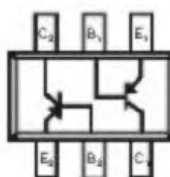
$V_{(BR)CBO}$: -40 V

Operating and storage junction temperature range

T_J, T_{stg} : $-55^{\circ}C$ to $+150^{\circ}C$

MAKING: K3N

SOT-363



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-30V, I_E=0$			-0.05	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5V, I_C=0$			-0.05	μA
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	$V_{CE}=-5V, I_C=-0.1mA, f=1KHz, R_g=1K\Omega$			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