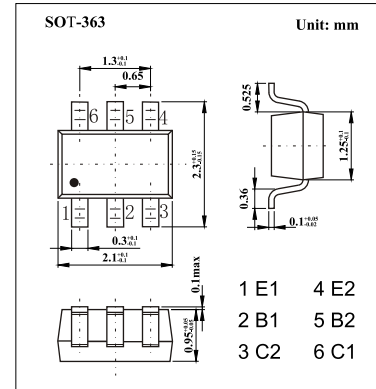
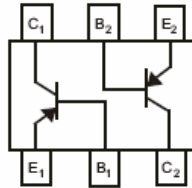


PNP Transistors

MMDT3906 (KMDT3906)

■ Features

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



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-40	V
Collector - Emitter Voltage	V_{CE0}	-40	
Emitter - Base Voltage	V_{EB0}	-5	
Collector Current - Continuous	I_C	-200	mA
Collector Power Dissipation	P_C	150	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = -100 \mu\text{A}$, $I_E = 0$	-40			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = -1 \text{ mA}$, $I_B = 0$	-40			
Emitter - base breakdown voltage	V_{EB0}	$I_E = -100 \mu\text{A}$, $I_C = 0$	-5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -40 \text{ V}$, $I_E = 0$			-100	nA
Collector- emitter cut-off current	I_{CEX}	$V_{CE} = -30 \text{ V}$, $V_{EB(0FF)} = 3 \text{ V}$			-50	
Emitter cut-off current	I_{EBO}	$V_{EB} = -5 \text{ V}$, $I_C = 0$			-50	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 \text{ mA}$, $I_B = -1 \text{ mA}$			-0.25	V
		$I_C = -50 \text{ mA}$, $I_B = -5 \text{ mA}$			-0.4	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10 \text{ mA}$, $I_B = -1 \text{ mA}$	-0.65		-0.85	
		$I_C = -50 \text{ mA}$, $I_B = -5 \text{ mA}$			-0.95	
DC current gain	$h_{FE(1)}$	$V_{CE} = -1 \text{ V}$, $I_C = -0.1 \text{ mA}$	60			
	$h_{FE(2)}$	$V_{CE} = -1 \text{ V}$, $I_C = -10 \text{ mA}$	100		300	
	$h_{FE(3)}$	$V_{CE} = -1 \text{ V}$, $I_C = -50 \text{ mA}$	60			
Delay time	t_d	$V_{CC} = -3 \text{ V}$, $V_{BE} = 0.5 \text{ V}$			35	ns
Rise time	t_r	$I_C = -10 \text{ mA}$, $I_{B1} = -I_{B2} = -1 \text{ mA}$			35	
Storage time	t_s	$V_{CC} = -3 \text{ V}$, $I_C = -10 \text{ mA}$, $I_{B1} = -I_{B2} = -1 \text{ mA}$			225	
Fall time	t_f	$V_{CC} = -3 \text{ V}$, $I_C = -10 \text{ mA}$, $I_{B1} = -I_{B2} = -1 \text{ mA}$			75	
Noise figure	NF	$V_{CE} = -5 \text{ V}$, $I_C = -0.1 \text{ mA}$, $f = 1 \text{ KHz}$, $R_g = 1 \text{ K}\Omega$			4	dB
Collector output capacitance	C_{ob}	$V_{CB} = -5 \text{ V}$, $I_C = -0.1 \text{ mA}$, $f = 1 \text{ MHz}$, $R_g = 1 \text{ K}\Omega$			4.5	pF
Transition frequency	f_T	$V_{CE} = -20 \text{ V}$, $I_C = -10 \text{ mA}$, $f = 100 \text{ MHz}$	250			MHz

■ Marking

Marking	K3N
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