

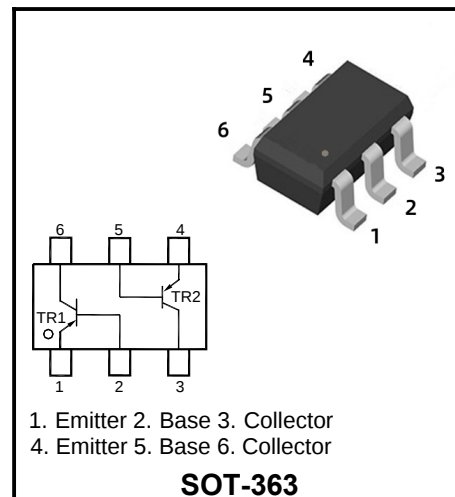
Dual Transistor (PNP+PNP)

Features

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

Marking Code

MMDT3906DW	K3N
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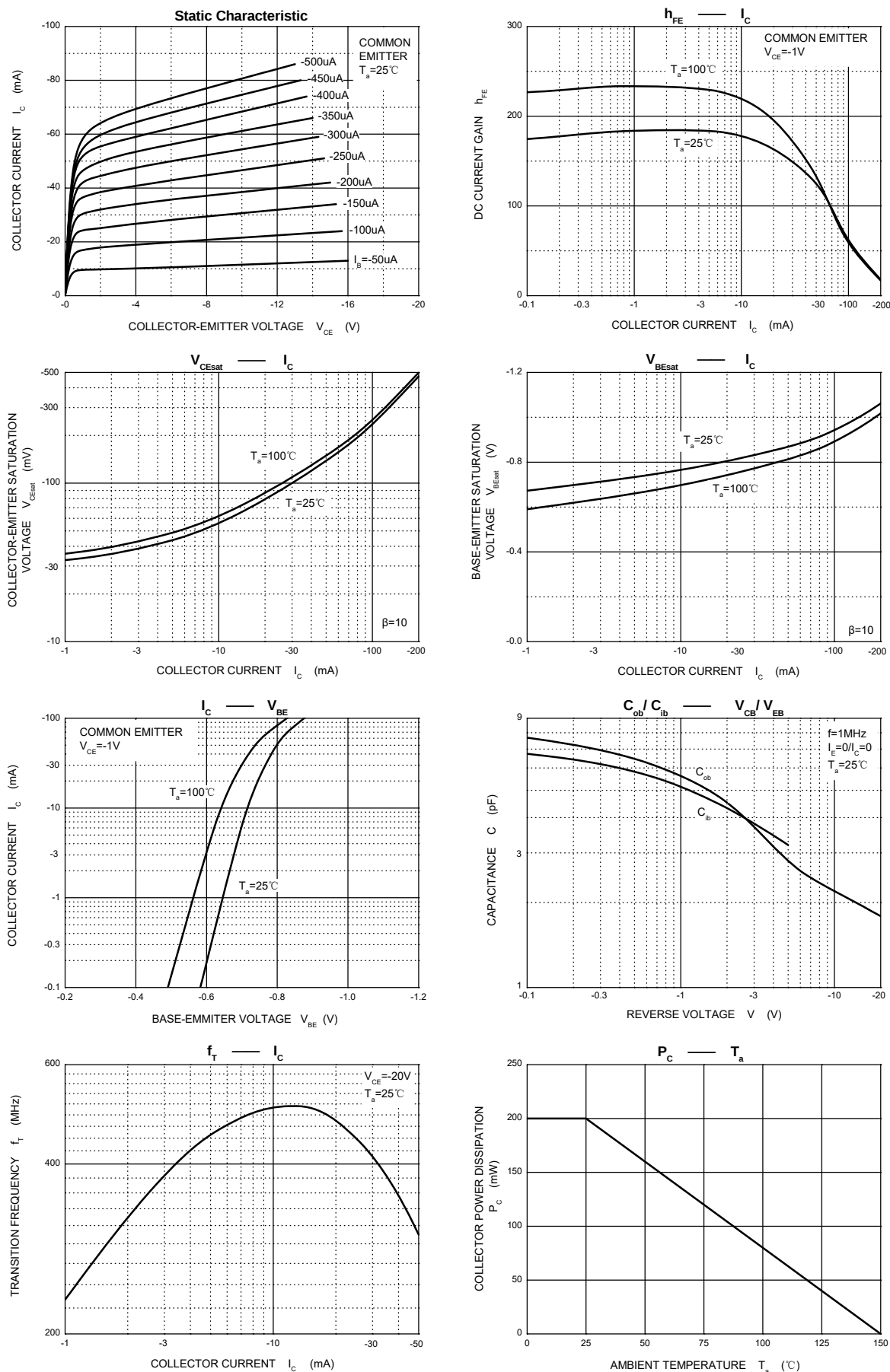
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	-40	V
Collector Emitter Voltage	$-V_{CEO}$	-40	V
Emitter Base Voltage	$-V_{EBO}$	-5	V
Collector Current	$-I_C$	-200	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to +150	°C

Electrical Characteristics (Ta=25°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_{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	$V_{CE} = -5V, I_C = -0.1mA, f = 1KHz, R_g = 1K\Omega$			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

Typical Characteristics



Ordering information

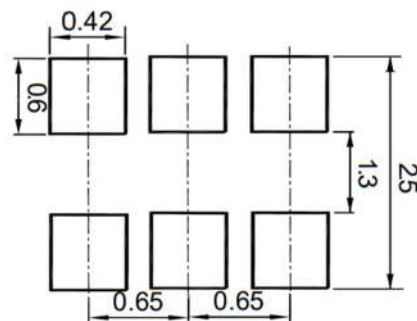
Package	Packing Description	Packing Quantity
SOT-363	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOT-363

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
A1	-	0.1	-	3.94
bp	0.20	0.30	7.87	11.81
c	0.10	0.25	3.94	9.84
D	1.8	2.2	70.87	86.61
E	1.15	1.35	45.28	53.15
e	1.3		51.18	
e1	0.65		25.6	
HE	2.0	2.2	78.74	86.6
Lp	0.15	0.45	5.90	17.71
Q	0.15	0.25	5.90	9.84
v	0.2		7.78	
w	0.2		7.78	
y	0.1		3.94	

The recommended mounting pad size



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