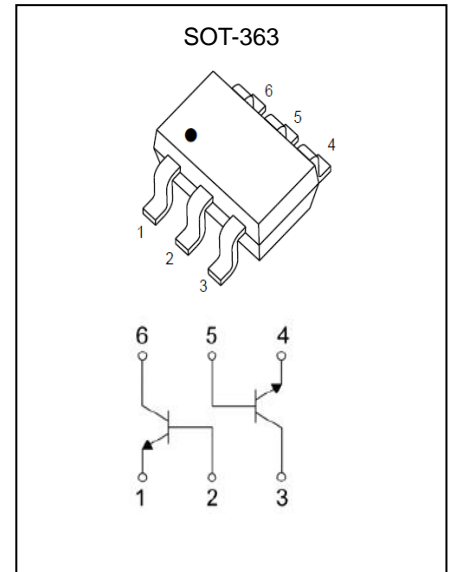


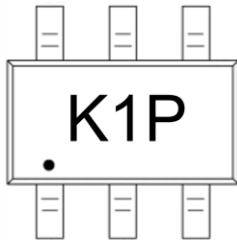
**MMDT2222A Dual Transistor(NPN+NPN)**

**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CBO</sub>	75	V
Collector-Emitter Voltage	V <sub>CEO</sub>	40	V
Emitter-Base Voltage	V <sub>EB0</sub>	6	V
Collector Current -Continuous	I <sub>c</sub>	0.6	A
Power Dissipation	P <sub>d</sub>	0.2	W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55~ +150	°C



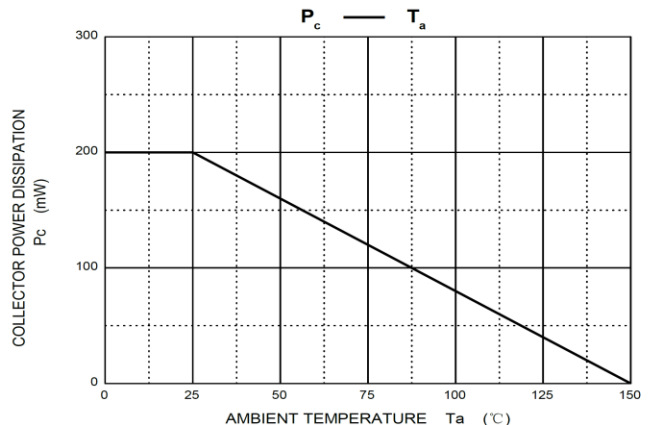
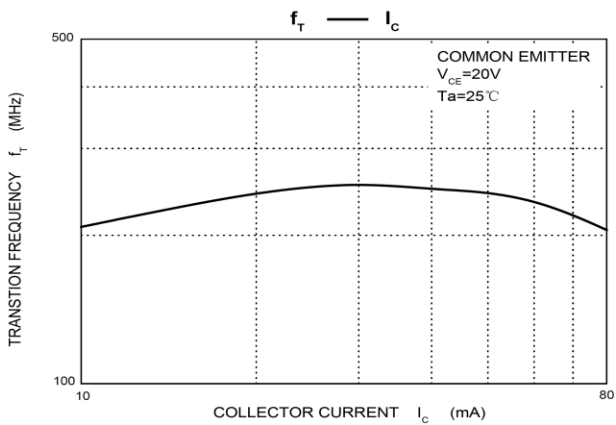
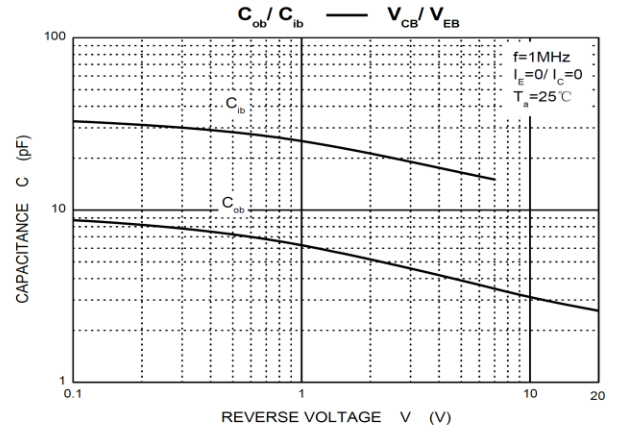
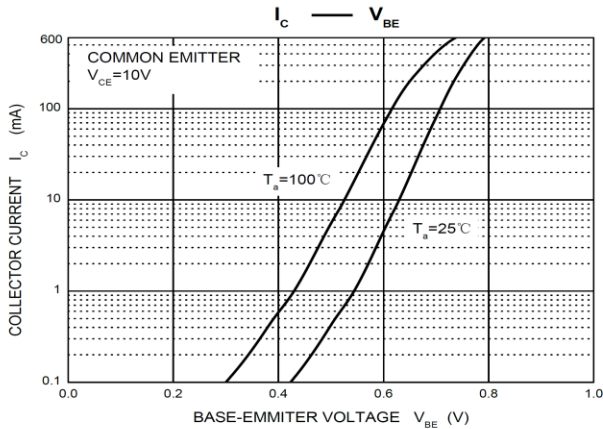
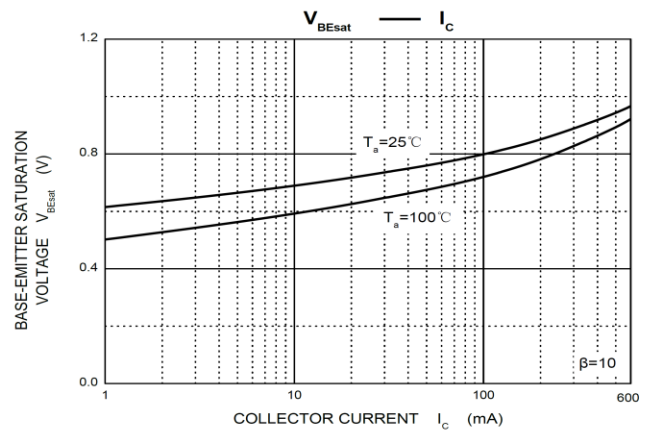
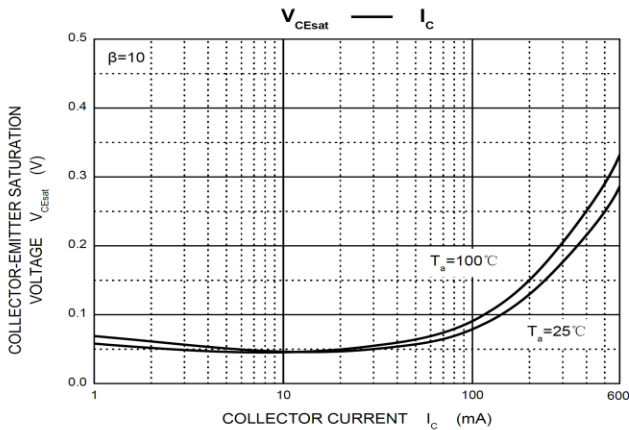
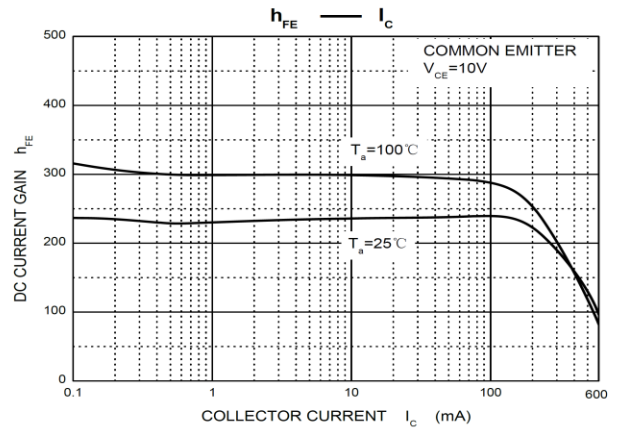
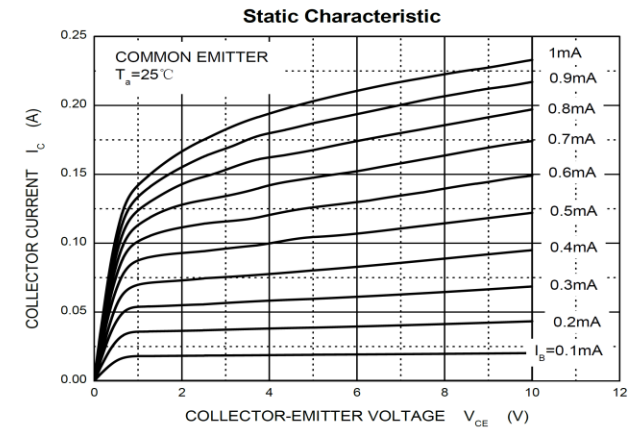
**Marking:K1P**



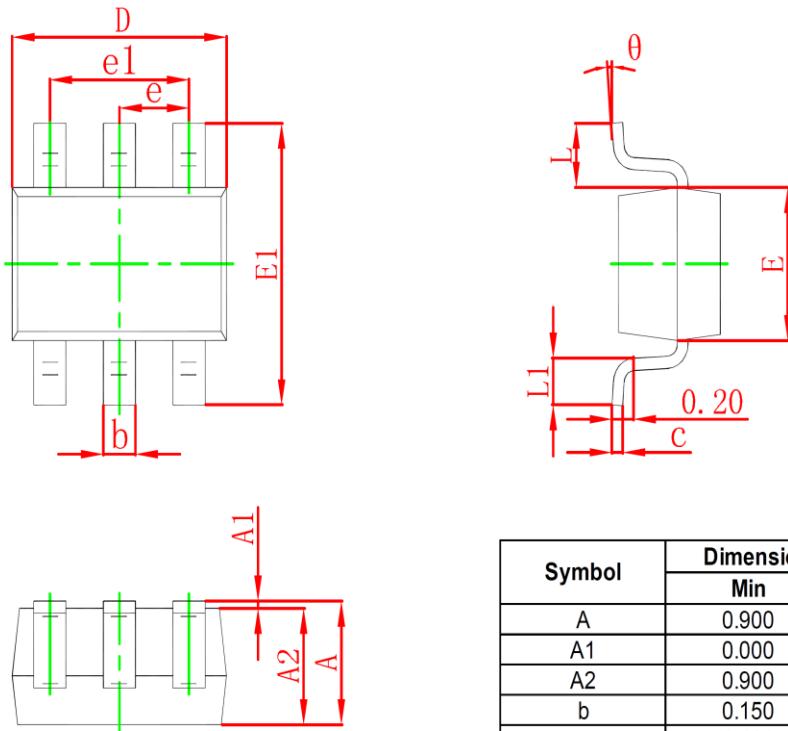
**ELECTRICAL CHARACTERISTICS( $T_a=25^{\circ}\text{C}$  unless otherwise noted)**

Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	75		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6		V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60\text{V}, I_E=0$		10	nA
Collector cut-off current	$I_{CEX}$	$V_{CE}=60\text{V}, V_{EB(off)}=3\text{V}$		10	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=3\text{V}, I_C=0$		10	nA
DC current gain	$h_{FE1}$	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	35		
	$h_{FE2}$	$V_{CE}=10\text{V}, I_C=1\text{mA}$	50		
	$h_{FE3}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	75		
	$h_{FE4}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100	300	
	$h_{FE5}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	40		
	$h_{FE6}$	$V_{CE}=1\text{V}, I_C=150\text{mA}$	35		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.3	V
		$I_C=500\text{mA}, I_B=50\text{mA}$		1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	0.6	1.2	V
		$I_C=500\text{mA}, I_B=50\text{mA}$		2	V
Transition frequency	$f_T$	$V_{CE}=20\text{V}, I_C=20\text{mA},$ $f=100\text{MHz}$	300		MHZ
Delay Time	$t_d$	$V_{CC}=30\text{V}, I_C=150\text{mA},$		10	ns
Rise Time	$t_r$	$V_{BE(off)}=0.5\text{V}, I_{B1}=15\text{mA}$		25	ns
Storage Time	$t_s$	$V_{CC}=30\text{V}, I_C=150\text{mA},$		225	ns
Fall Time	$t_f$	$I_{B1}=I_{B2}=15\text{mA}$		60	ns
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		8	pF
Input Capacitance	$C_{ib}$	$V_{EB}=0.5\text{V}, I_C=0, f=1\text{MHz}$		25	pF
Noise Figure	NF	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$ $f=1\text{KHz}, R_s=1\text{K}\Omega$		4	dB

**Typical Characteristics**



## SOT-363 Package Information

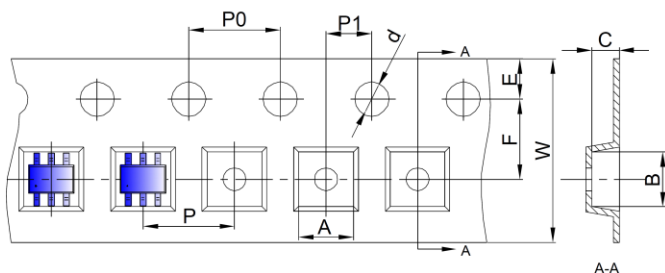


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

## SOT-363 Tape and Reel

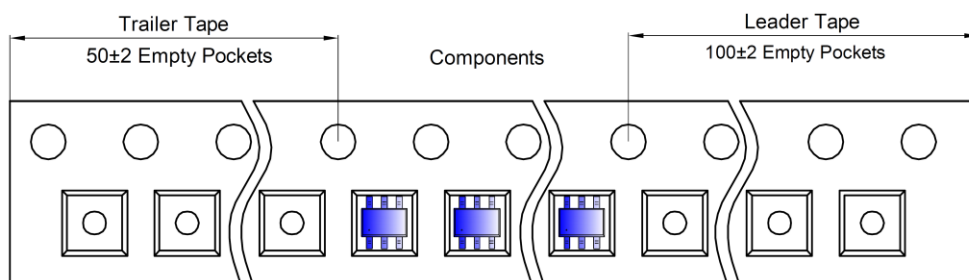
### SOT-363 Tape and reel

SOT-363 Embossed Carrier Tape

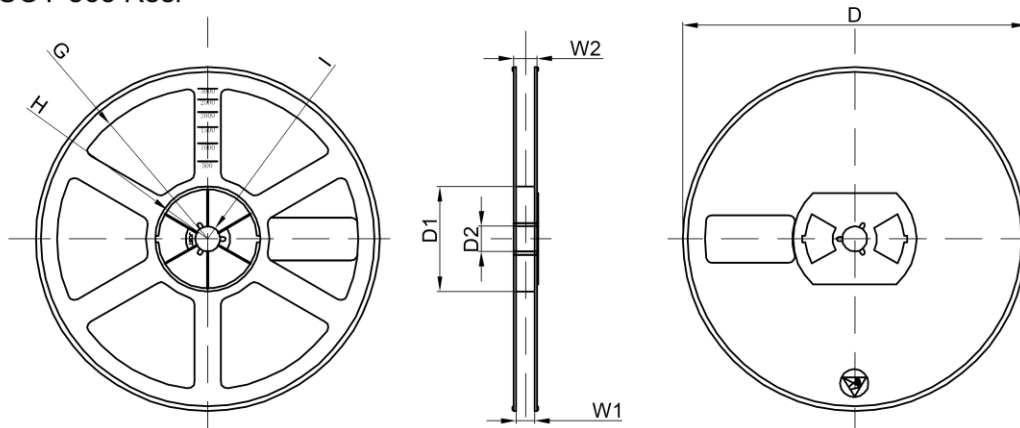


Dimensions are in millimeter											
Pkg type	A	B	C	d	E	F	P0	P	P1	W	
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00	

### SOT-363 Tape Leader and Trailer



### SOT-363 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	