

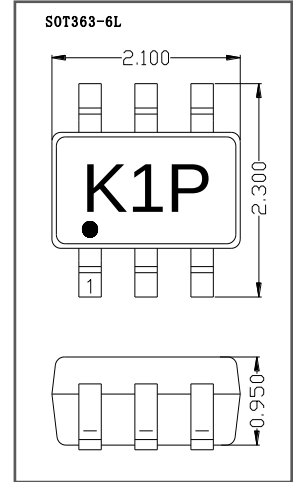
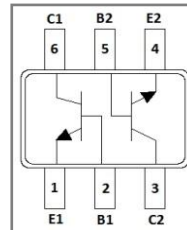
DATA SHEET

MMDT2222A

- ◇Epoxy meets UL 94 V-0 flammability rating
- ◇Lead Free Finish/RoHS Compliant
- ◇For Switching and AF Amplifier Applications
- ◇Rugged and reliable

Device Marking Code	
MMDT2222A	K1P

Equivalent Circuit



MAXIMUM RATINGS (Ta = 25 °C)

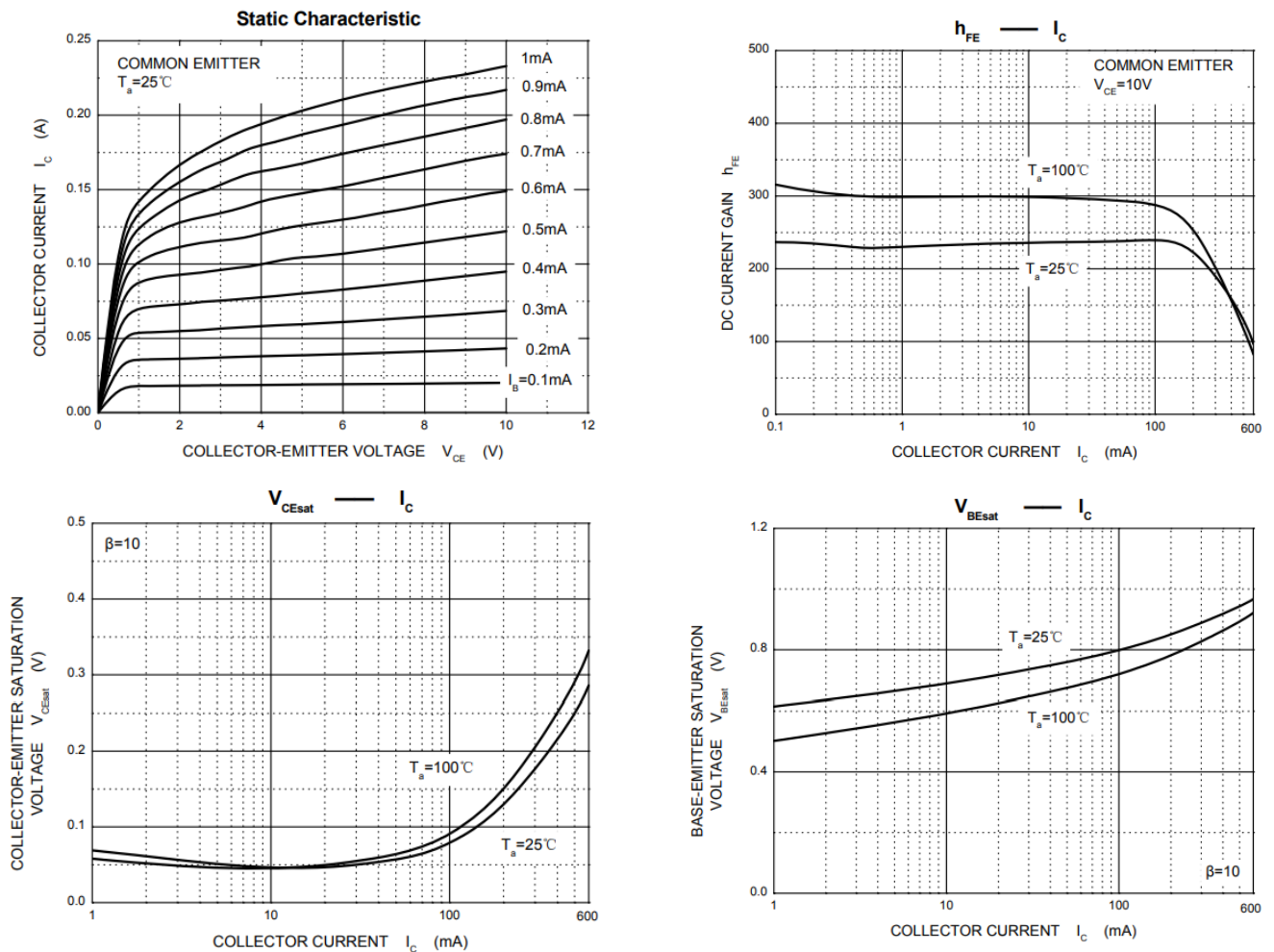
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
P_C	Collector Power Dissipation	200	mW
I_C	Collector Current	600	mA
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 to 150	°C

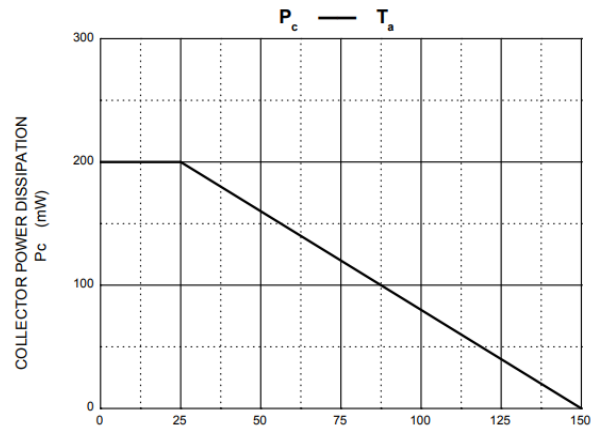
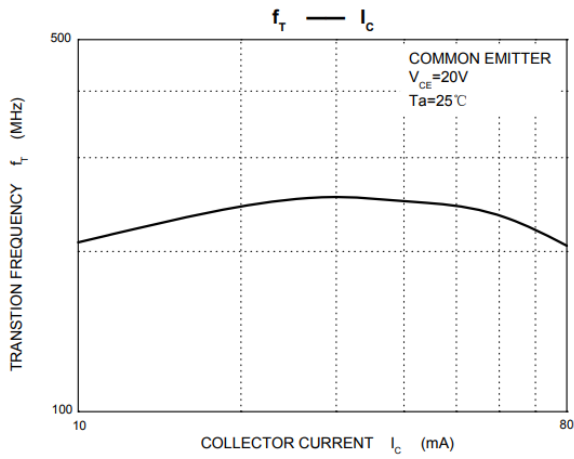
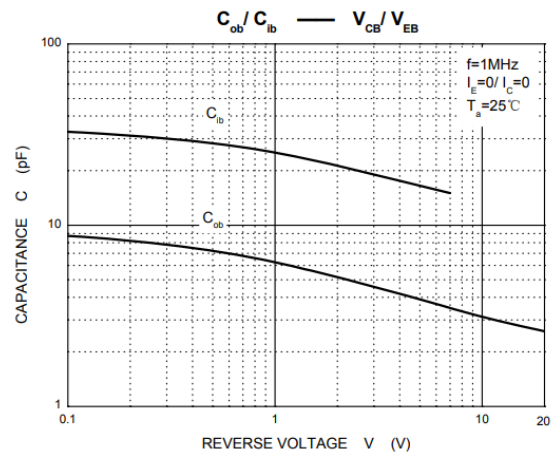
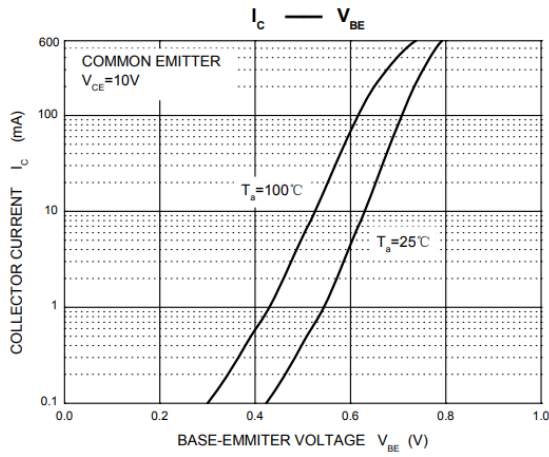
ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=10\mu A, I_E=0$	75			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA, I_B=0$	40			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu A, I_C=0$	6			V
I_{CBO}	Collector cut-off current	$V_{CB}=60V, I_E=0$			10	nA
I_{CEX}	Collector cut-off current	$V_{CE}=60V, V_{EB(off)}=3V$			10	nA
I_{EBO}	Emitter-Base Cutoff Current	$V_{EB}=3V, I_C=0$			10	nA
h_{FE}	DC current gain*	$V_{CE}=10V, I_C=0.1mA$	35			
		$V_{CE}=10V, I_C=1mA$	50			
		$V_{CE}=10V, I_C=10mA$	75			
		$V_{CE}=10V, I_C=150mA$	100		300	
		$V_{CE}=10V, I_C=500mA$	40			
		$V_{CE}=1V, I_C=150mA$	35			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=150mA, I_B=15mA$			0.3	V
		$I_C=500mA, I_B=50mA$			1	V

$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=150mA, I_B=15mA$	0.6		1.2	V
		$I_C=500mA, I_B=50mA$			2	
f_T	Transition frequency	$V_{CE}=20V, I_C=20mA$ $f=100MHz$	300			MHZ
Cob	Collector output capacitance	$V_{CB}=10V, I_E=0$ $f=1MHz$			8	pF
C_{ib}	Input Capacitance	$V_{EB}=0.5V, I_C=0, f=1MHz$			25	pF
NF	Noise figure	$V_{CE}=10V, I_C=0.1mA$ $f=1kHz, R_S=1K\Omega$			4	dB
t_d	Delay time	$V_{CC}=30V, V_{BE(off)}=0.5V$			10	nS
t_r	Rise time	$I_C=150mA, I_{B1}=15mA$			25	nS
t_s	Storage time	$V_{CC}=30V, I_C=150mA$			225	nS
t_f	Fall time	$I_{B1}=-I_{B2}=15mA$			60	nS

TYPICAL CHARACTERISTICS

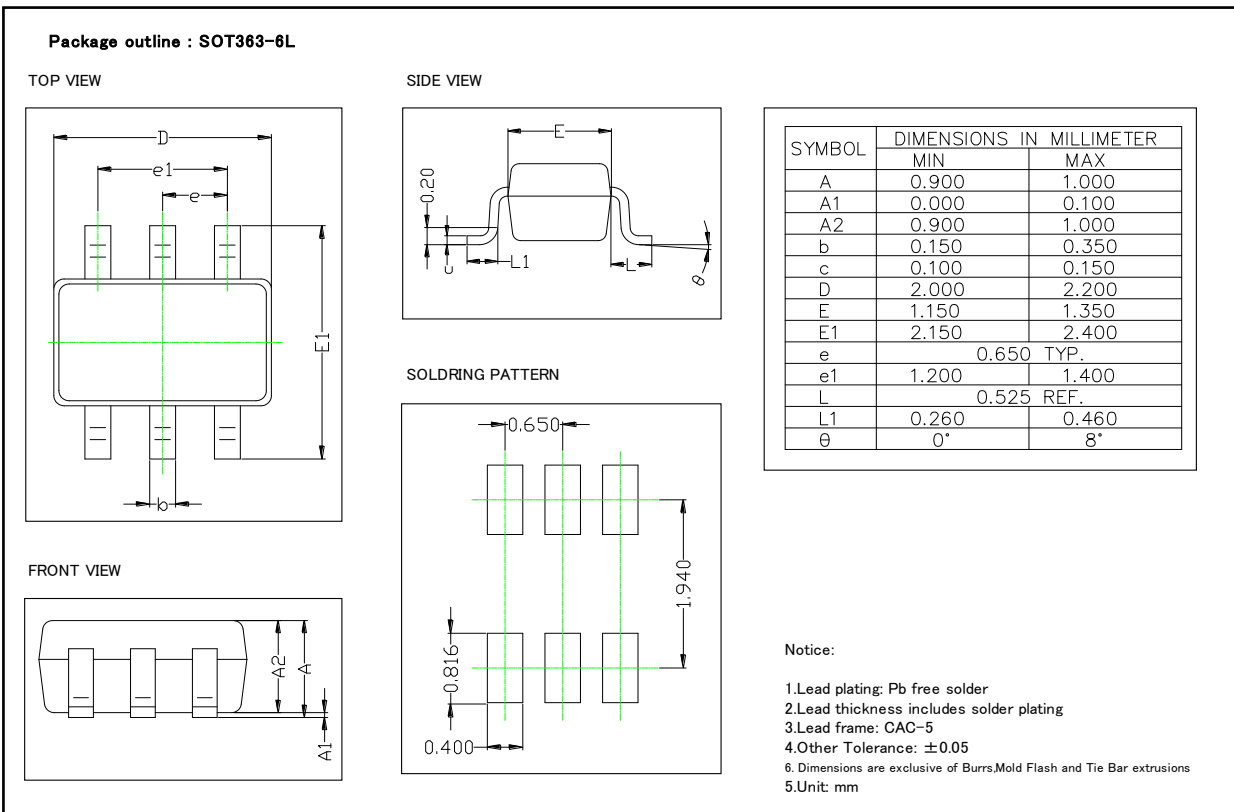




ORDERING INFORMATION

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
MMDT2222A	SOT363-6L	Tape & Reel 3000pcs /7" Reel	8mm	4mm	Conductive	

PACKAGE DIMENSIONS



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