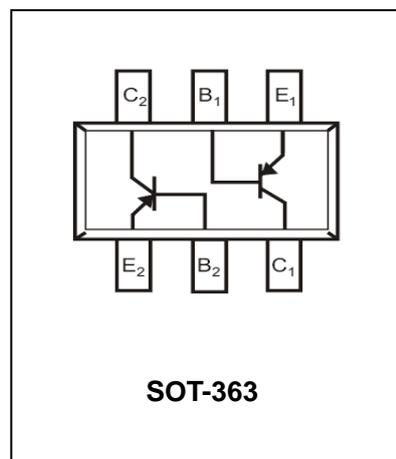


## Dual PNP Small Signal Surface Mount Transistor MMDT5401

### FEATURES

- Epitaxial planar die construction.
- Complementary NPN type available MMDT5551.
- Ultra-small surface mount package.



### APPLICATIONS

- For Low power amplification and switching.

### ORDERING INFORMATION

Type No.	Marking	Package Code
MMDT5401	K4M	SOT-363

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	-160	V
$V_{CEO}$	Collector-Emitter Voltage	-150	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-200	mA
$P_D$	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	625	°C/W
$T_j, T_{stg}$	Junction and Storage Temperature	-55 to +150	°C

## Dual PNP Small Signal Surface Mount Transistor MMDT5401

ELECTRICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}$ $I_E=0$	-160	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1.0\text{mA}$ $I_B=0$	-150	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}$ $I_C=0$	-5	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-120\text{V}$ $I_E=0$ $V_{CB}=-120\text{V}$ $I_E=0$ $T_A=100^\circ\text{C}$	-	-50	nA $\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-3\text{V}$ $I_C=0$	-	-50	nA
DC current gain	$h_{FE}$	$V_{CE}=-5\text{V}$ $I_C=-1.0\text{mA}$	50	-	-
		$V_{CE}=-5\text{V}$ $I_C=-10\text{mA}$	60	240	
		$V_{CE}=-5\text{V}$ $I_C=-50\text{mA}$	50	-	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-10\text{mA}$ $I_B=-1.0\text{mA}$ $I_C=-50\text{mA}$ $I_B=-5.0\text{mA}$	-	-0.2 -0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-10\text{mA}$ $I_B=-1.0\text{mA}$ $I_C=-50\text{mA}$ $I_B=-5.0\text{mA}$	-	-1.0	V
Transition frequency	$f_T$	$V_{CE}=-10\text{V}$ $I_C=-10\text{mA}$ $f=100\text{MHz}$	100	300	MHz
Output Capacitance	$C_{obo}$	$V_{CB}=-10\text{V}$ , $f=1.0\text{MHz}$ , $I_E=0$	-	6	pF
Noise Figure	NF	$V_{CE}=-5\text{V}$ $I_C=-200\mu\text{A}$ $f=1.0\text{KHz}$	-	8.0	dB

TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified

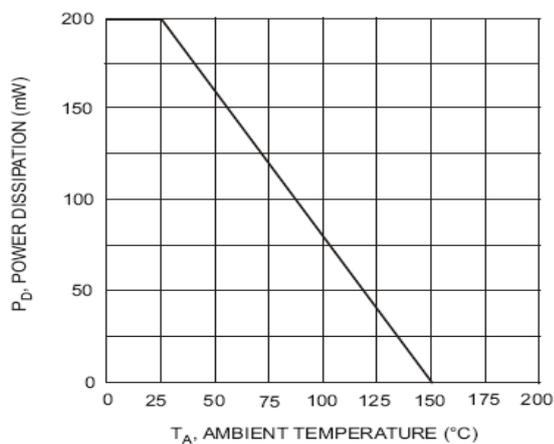


Fig. 1, Max Power Dissipation vs Ambient Temperature

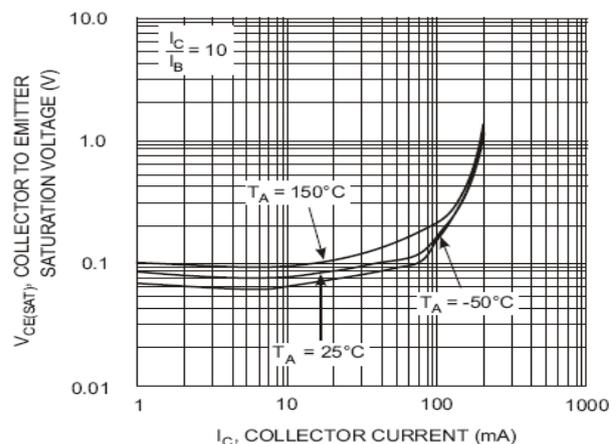


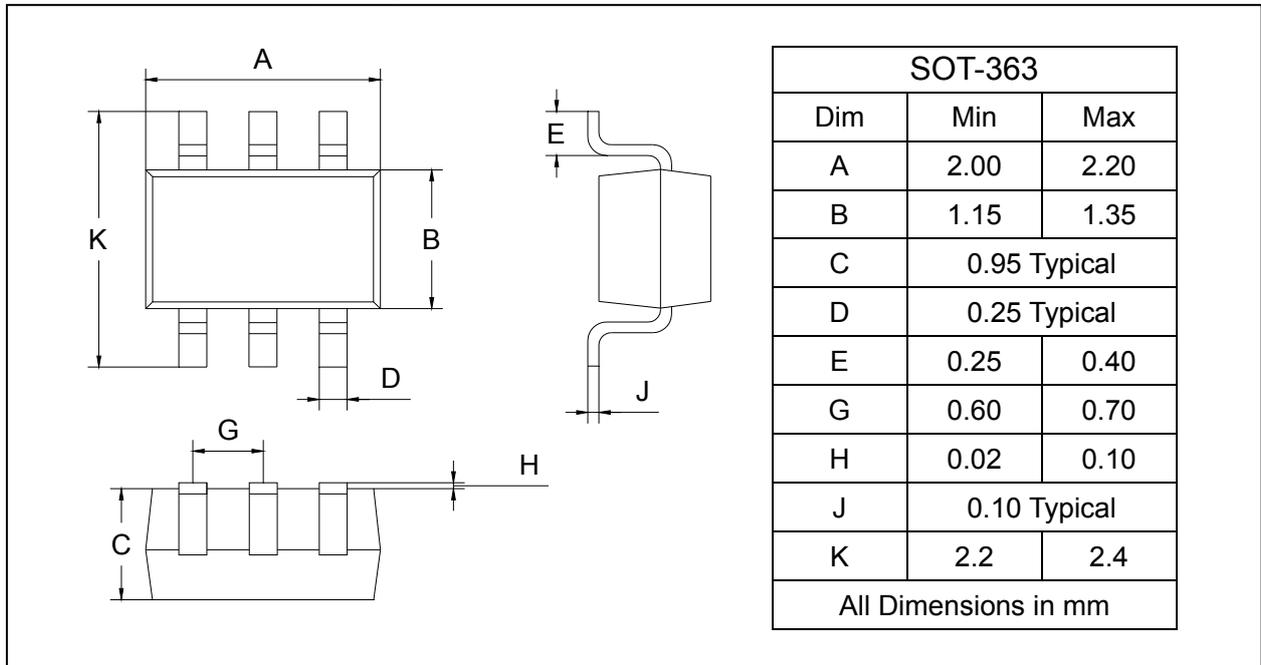
Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

## Dual PNP Small Signal Surface Mount Transistor MMDT5401

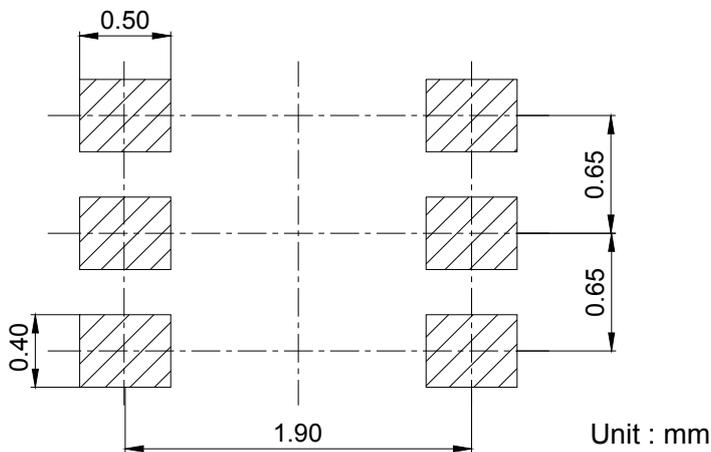
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-363



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
MMDT5401	SOT-363	3000/Tape&Reel