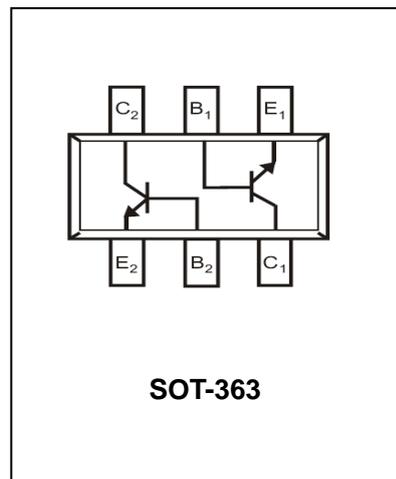


Dual NPN Small Signal Surface Mount Transistor **MMDT5551**

FEATURES

- Epitaxial planar die construction.
- Complementary PNP type available MMDT5401.
- Ultra-small surface mount package.



APPLICATIONS

- Dual NPN small signal surface mount transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
MMDT5551	K4N	SOT-363

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	180	V
V _{CEO}	Collector-Emitter Voltage	160	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current -Continuous	600	mA
P _D	Power Dissipation	200	mW
R _{θJA}	Thermal Resistance, Junction to Ambient	625	°C/W
T _j , T _{stg}	Junction and Storage Temperature	-55 to +150	°C

Dual NPN Small Signal Surface Mount Transistor **MMDT5551**

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A$ $I_E=0$	180	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA$ $I_B=0$	160	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A$ $I_C=0$	6	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=120V$ $I_E=0$	-	50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V$ $I_C=0$	-	50	nA
DC current gain	h_{FE}	$V_{CE}=5V$ $I_C=1.0mA$	80	-	-
		$V_{CE}=5V$ $I_C=10mA$	80	250	
		$V_{CE}=5V$ $I_C=50mA$	30	-	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA$ $I_B=1mA$ $I_C=50mA$ $I_B=5mA$	-	0.15 0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10mA$ $I_B=1mA$ $I_C=50mA$ $I_B=5mA$	- -	1 1	V
Transition frequency	f_T	$V_{CE}=10V$ $I_C=10mA$ $f=100MHz$	100	300	MHz
Output Capacitance	C_{obo}	$V_{CB}=10V$, $f=1.0MHz$, $I_E=0$	-	6	pF
Noise Figure	NF	$V_{CE}=5V$, $f=1.0kHz$, $I_C=200\mu A$ $R_g=1.0k\Omega$	-	8.0	dB

Dual NPN Small Signal Surface Mount Transistor MMDT5551

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

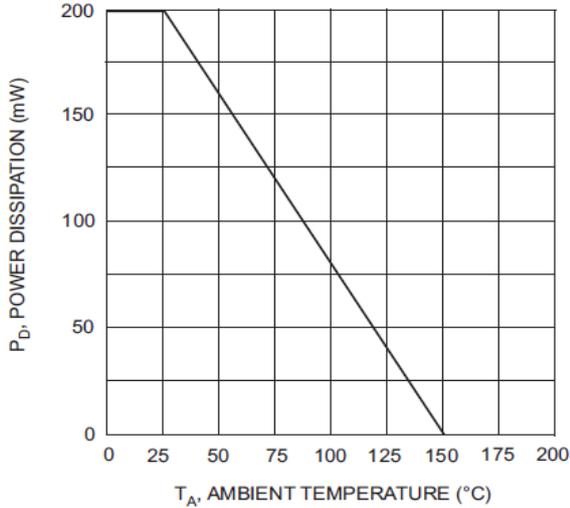


Fig. 1, Max Power Dissipation vs Ambient Temperature

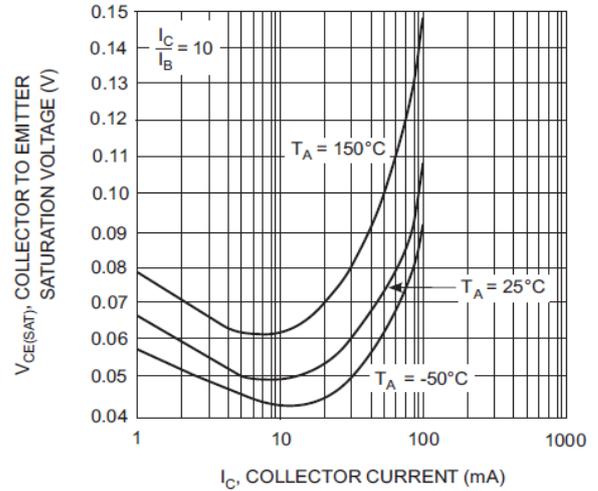


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

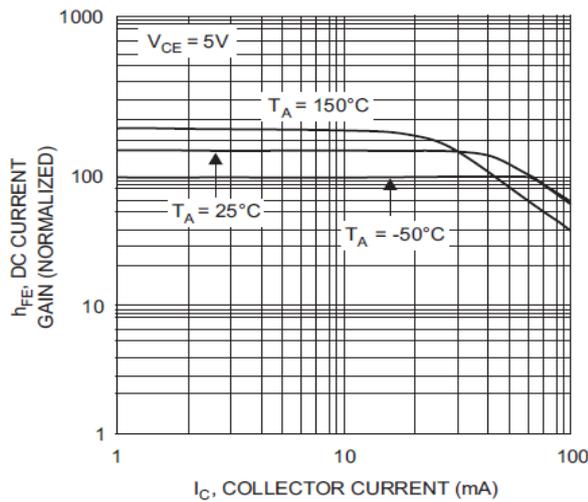


Fig. 3, DC Current Gain vs Collector Current

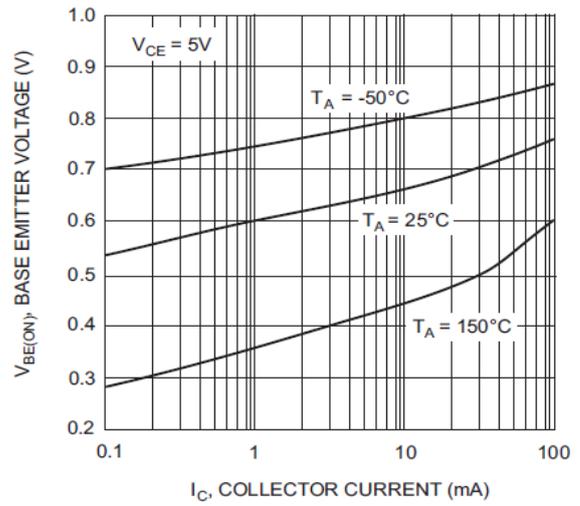


Fig. 4, Base Emitter Voltage vs. Collector Current

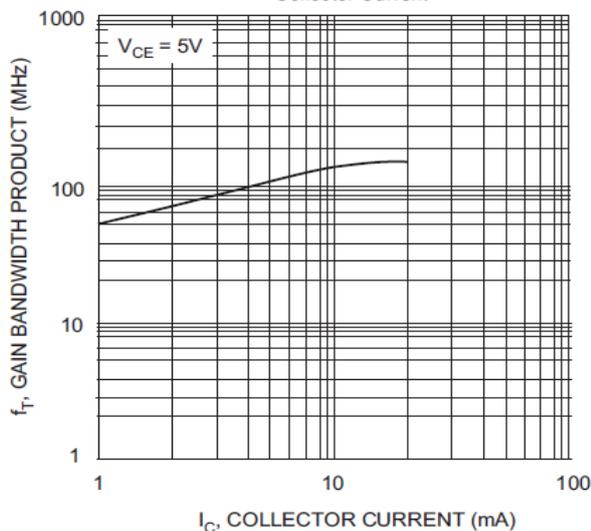


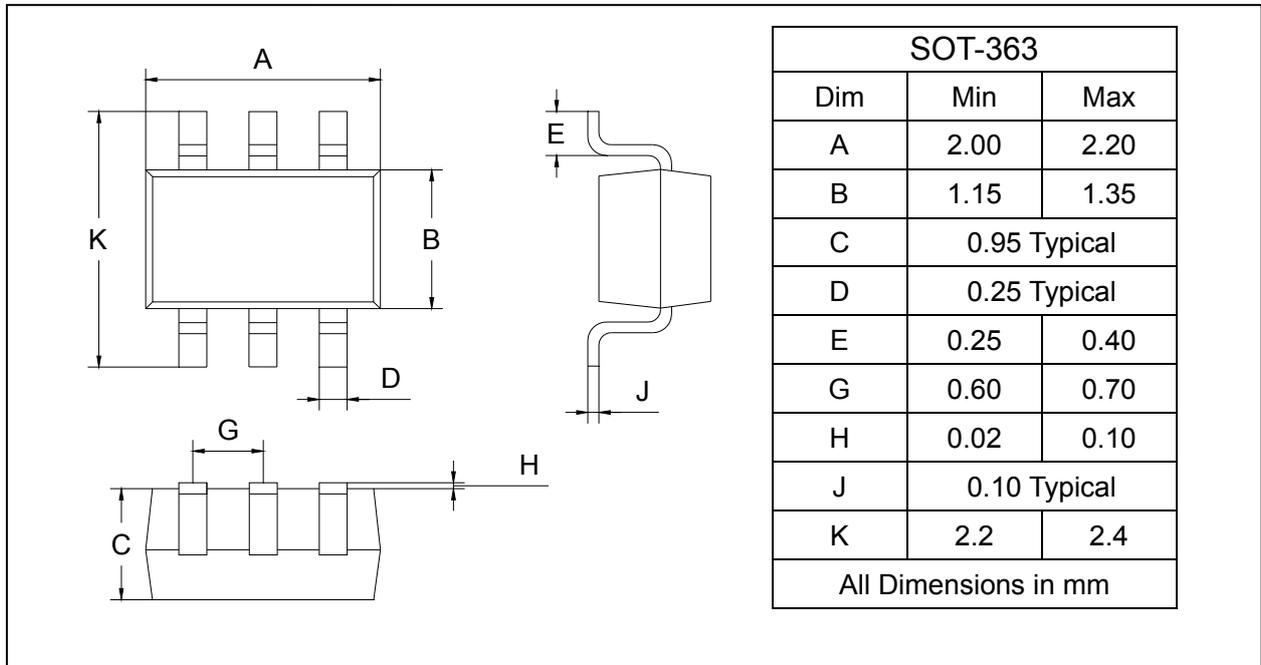
Fig. 5, Gain Bandwidth Product vs. Collector Current

Dual NPN Small Signal Surface Mount Transistor MMDT5551

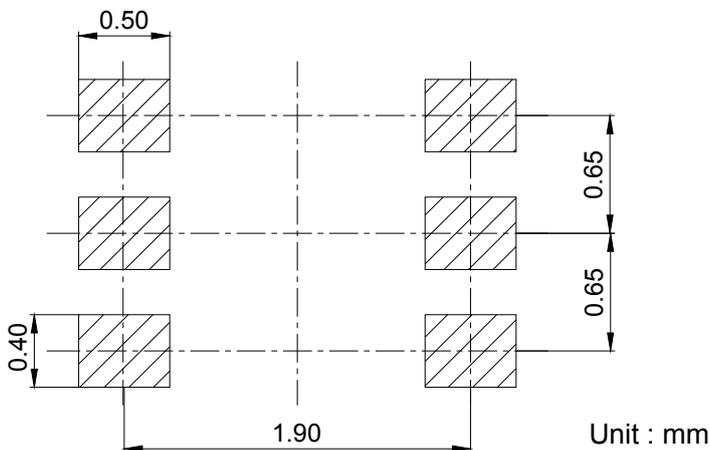
PACKAGE OUTLINE

Plastic surface mounted package

SOT-363



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MMDT5551	SOT-363	3000/Tape&Reel