

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

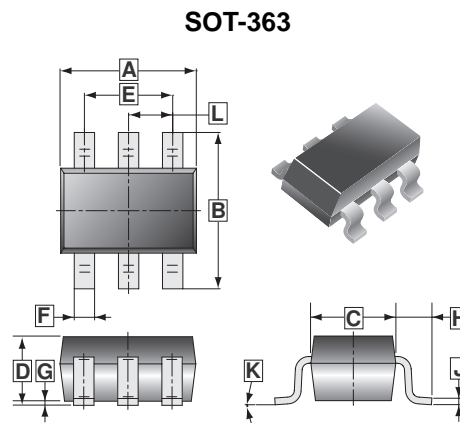
- Complementary PNP Type Available (MMDT5401)
- Epitaxial Planar Die Construction
- Ideal for Medium Power Amplification and Switching

MARKING

K4N

PACKAGING DIMENSION

Package	MPQ	Leader Size
SOT-363	3K	7 inch

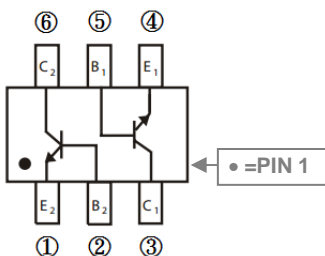


ORDER INFORMATION

Part Number	Type
MMDT5551	Lead (Pb)-free
MMDT5551-C	Lead (Pb)-free and Halogen-free

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.80	2.20	G	0.100 REF.	
B	1.80	2.45	H	0.525 REF.	
C	1.15	1.35	J	0.08	0.25
D	0.80	1.10	K	8°	
E	1.10	1.50	L	0.650 TYP.	
F	0.10	0.35			

EQUIVALENT CIRCUIT



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	V _{CB0}	180	V
Collector-Emitter Voltage	V _{CE0}	160	
Emitter-Base Voltage	V _{EB0}	6	
Collector Current-Continuous	I _c	0.2	A
Collector Power Dissipation	P _c	0.2	W
Junction & Storage Temperature	T _J , T _{STG}	150, -55~150	°C

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	180	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	160	-	-	V	$I_C=1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	$I_E=10\mu\text{A}, I_C=0$
Collector Cut-off Current	I_{CBO}	-	-	0.05	μA	$V_{CB}=120\text{V}, I_E=0$
Emitter Cut-off Current	I_{EBO}	-	-	0.05	μA	$V_{EB}=4\text{V}, I_C=0$
DC Current Gain	h_{FE}	80	-	-		$V_{CE}=5\text{V}, I_C=1\text{mA}$
		100	-	300		$V_{CE}=5\text{V}, I_C=10\text{mA}$
		30	-	-		$V_{CE}=5\text{V}, I_C=50\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.15	V	$I_C=10\text{mA}, I_B=1\text{mA}$
		-	-	0.2		$I_C=50\text{mA}, I_B=5\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1	V	$I_C=10\text{mA}, I_B=1\text{mA}$
		-	-	1		$I_C=50\text{mA}, I_B=5\text{mA}$
Transition Frequency	f_T	100	-	300	MHz	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$
Output Capacitance	C_{OB}	-	-	6	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$
Noise Figure	NF	-	-	8	dB	$V_{CE}=5\text{V}, I_C=0.2\text{mA}, R_S=1\text{k}\Omega, f=1\text{kHz}$

CHARACTERISTIC CURVES

Static Characteristic

