

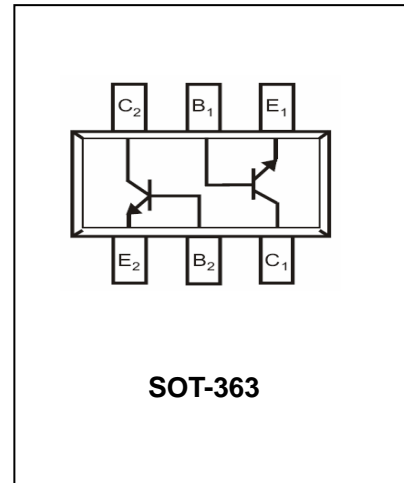
Dual NPN Small Signal Surface Mount Transistor **MMDT2907A**

FEATURES

- Epitaxial planar die construction.
- Complementary NPN type available MMDT2222A.
- Ultra-small surface mount package.



Lead-free



APPLICATIONS

- For Low power amplification and switching.

ORDERING INFORMATION

Type No.	Marking	Package Code
MMDT2907A	K2F	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	-60	V
V _{CEO}	Collector-Emitter Voltage	-60	V
V _{EBO}	Emitter-Base Voltage	-5	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	-55to+150	°C

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

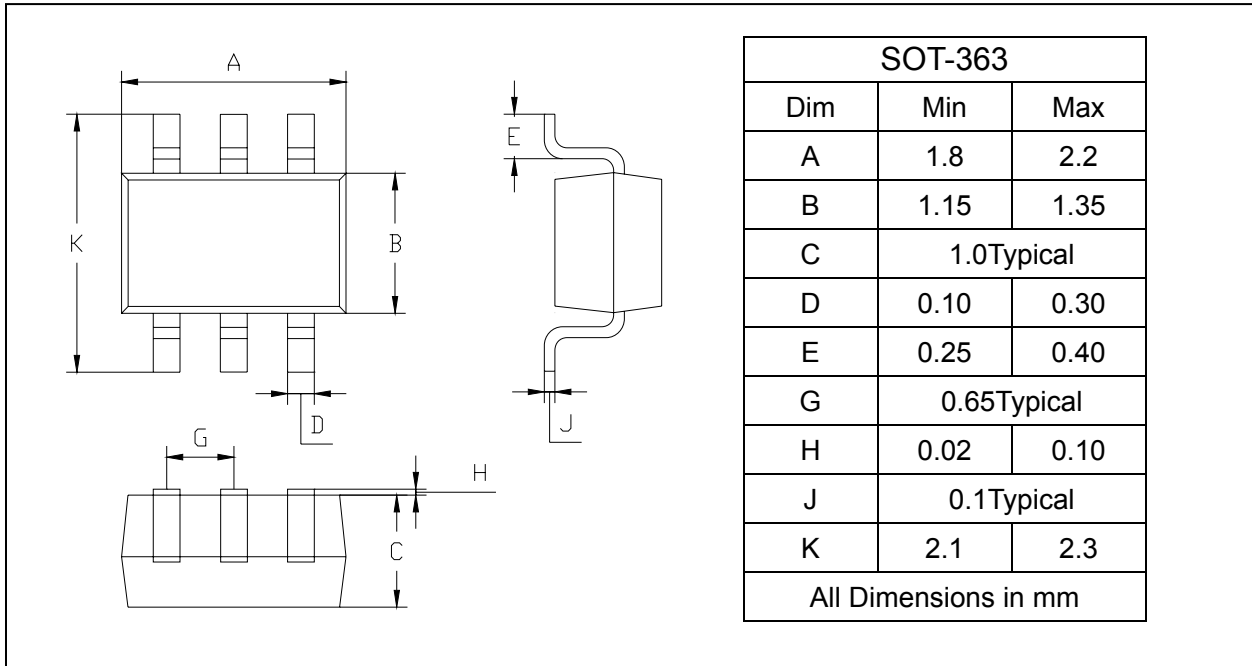
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A$ $I_E = 0$	-60	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA$ $I_B = 0$	-60	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A$ $I_C = 0$	-5	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -50V$ $I_E = 0$ $V_{CB} = -50V$ $I_E = 0$ $T_A = 125^\circ C$	-	-10	nA μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3V$ $I_C = 0$	-	-10	nA
DC current gain	h_{FE}	$V_{CE} = -10V$ $I_C = -100\mu A$	75	-	-
		$V_{CE} = -10V$ $I_C = -1.0mA$	100	-	
		$V_{CE} = -10V$ $I_C = -10mA$	100	-	
		$V_{CE} = -10V$ $I_C = -150mA$	100	300	
		$V_{CE} = -10V$ $I_C = -500mA$	50	-	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -150mA$ $I_B = -15mA$ $I_C = -500mA$ $I_B = -50mA$	-	-0.4 -1.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -150mA$ $I_B = -15mA$ $I_C = -500mA$ $I_B = -50mA$	-	-1.3 -2.6	V
Transition frequency	f_T	$V_{CE} = -20V$ $I_C = -50mA$ $f = 100MHz$	200		MHz
SMALL SIGNAL CHARACTERISTICS					
Output Capacitance	C_{obo}	$V_{CB} = -10V, f = 1.0MHz, I_E = 0$	-	8	pF
Input Capacitance	C_{ibo}	$V_{EB} = -2.0V, f = 1.0MHz, I_C = 0$	-	25	pF
SWITCHING CHARACTERISTICS					
Delay time	t_d	$V_{CC} = -30V, I_C = -150mA, I_{B1} = -15mA$		10	ns
Rise time	t_r			40	ns
Storage time	t_s	$V_{CC} = -6V, I_C = -150mA$ $I_{B1} = -I_{B2} = -15mA$		225	ns
Fall time	t_f			60	ns

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PACKAGE OUTLINE

Plastic surface mounted package

SOT-363



PACKAGE INFORMATION

Device	Package	Shipping
MMDT2907A	SOT-363	3000/Tape&Reel