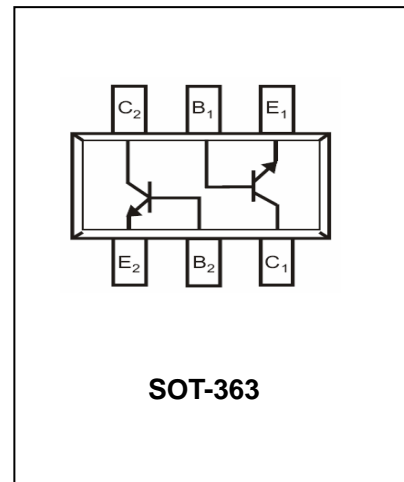


## Dual NPN Small Signal Surface Mount Transistor **MMDT2907A**

### FEATURES

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



### 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 <sub>CBO</sub>	Collector-Base Voltage	-60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-60	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-600	mA
P <sub>D</sub>	Power Dissipation	200	mW
R <sub>θJA</sub>	Thermal Resistance, Junction to Ambient	625	°C/W
T <sub>j</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-55to+150	°C

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

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

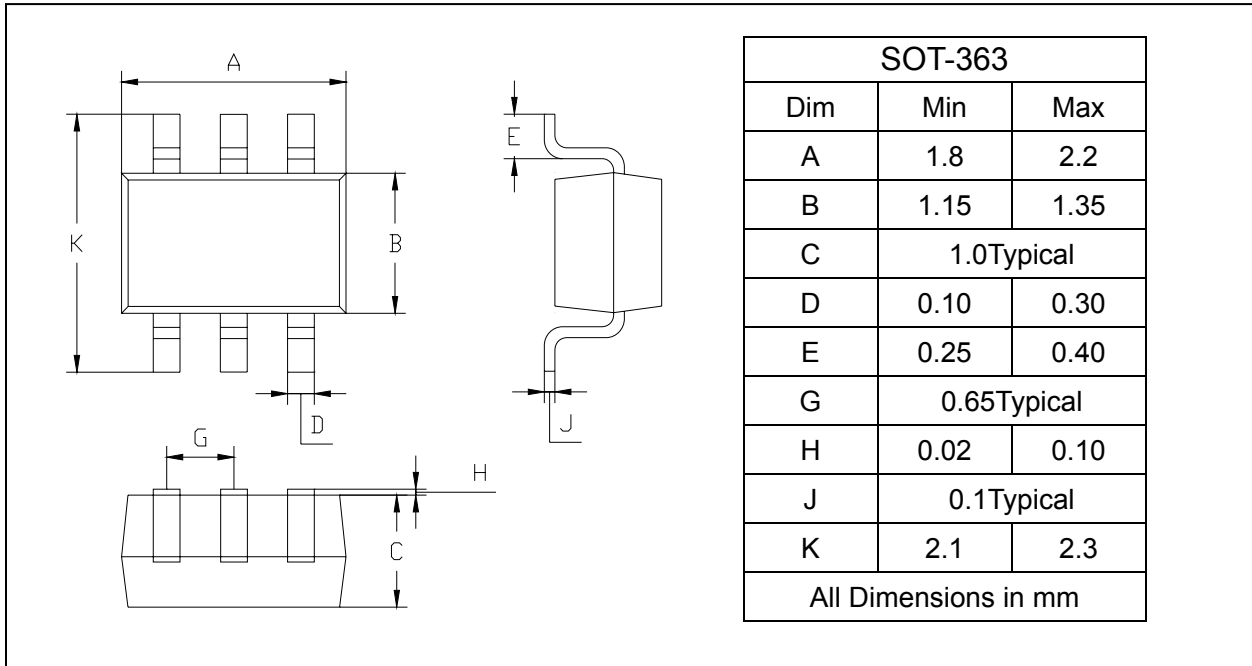
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A$ $I_E = 0$	-60	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA$ $I_B = 0$	-60	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A$ $I_C = 0$	-5	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -50V$ $I_E = 0$ $V_{CB} = -50V$ $I_E = 0$ $T_A = 125^\circ C$	-	-10	nA $\mu A$
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

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

### PACKAGE OUTLINE

Plastic surface mounted package

SOT-363



### PACKAGE INFORMATION

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