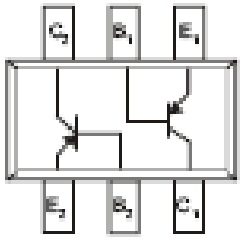
Dual NPN Small Signal Surface Mount Transistor MMDT2907A

FEATURES

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

Pb
Lead-free



SOT-363

APPLICATIONS

- For Low power amplification and switching.

ORDERING INFORMATION

Type No.	Marking	Package Code
MMDT2907A	K2F	SOT-363

MAXIMUM RATING @ Ta=25℃ 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
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	625	℃/W
T_j, T_{stg}	Junction and Storage Temperature	-55to+150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA 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=-10μA 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℃	-	-10	nA μA
Collecter cut-off current	I_{CEX}	V_{CE}=-30V ,$V_{EB(OFF)}$=-0.5V	-	-50	nA
Base cut-off current	I_{BL}	V_{CE}=-30V ,$V_{EB(OFF)}$=-0.5V	-	-50	nA
DC current gain	h_{FE}	V_{CE}=-10V I_C=-100μA	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
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	-	30	pF
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

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

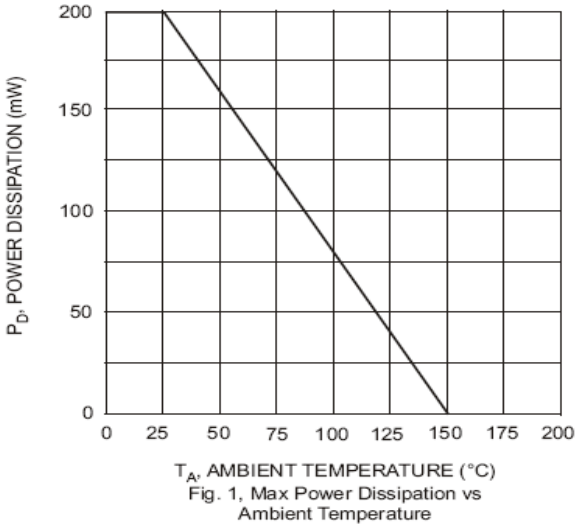


Fig. 1, Max Power Dissipation vs Ambient Temperature

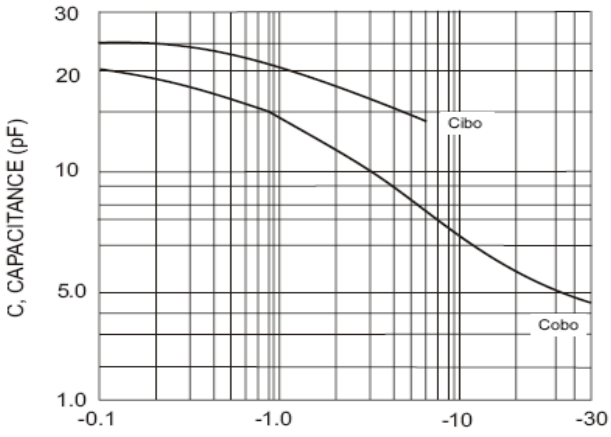
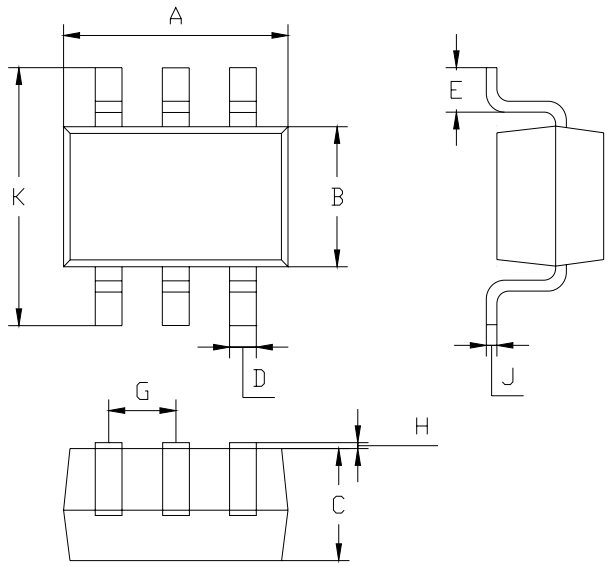


Fig. 2 Typical Capacitance

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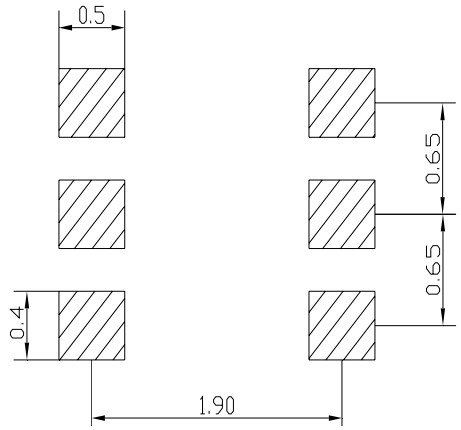
PACKAGE OUTLINE

Plastic surface mounted package SOT-363



SOT-363		
Dim	Min	Max
A	1.8	2.2
B	1.15	1.35
C	1.0Typical	
D	0.10	0.30
E	0.25	0.40
G	0.65Typical	
H	0.02	0.10
J	0.1Typical	
K	2.1	2.3
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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