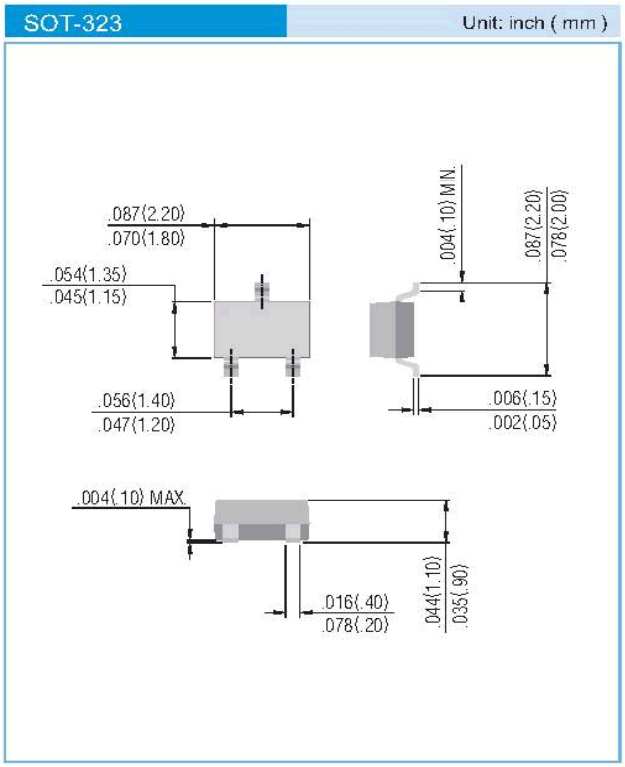
PRELIMINARY DATA SHEET

MBT2907AW

PNP GENERAL PURPOSE SWITCHING TRANSISTOR

VOLTAGE	60V	POWER	200mW



FEATURES

PNP epitaxial silicon, planar design

Collector-emitter voltage VCE = -60V

Collector current IC =-600mA

MECHANICAL DATA

Case: SOT-323

Terminals: Solderable per MIL-STD-202, Method 208

Approx Weight: 0.008 grams

Marking: M7A

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	Value	UNIT
Collector - Emitter Voltage	V_{CE0}	-60	V
Collector - Base Voltage	V_{CB0}	-60	V
Emitter – Base Voltage	V_{EB0}	-5.0	V
Collector Current - Continuous	I_C	-600	mA

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	Value	UNIT
Max Power Dissipation (Note 1)	P_{TOT}	200	mW
Storage Temperature	T_{STG}	-55 to 150	℃
Junction Temperature	T_J	-55 to 150	℃
Thermal Resistance , Junction to Ambient	$R_{\theta JA}$	625	℃/W

Note 1: Transistor mounted on FR-5 board 1.0 x 0.75 x 0.062 in.

ELECTRICAL CHARACTERISTICS (T_J = 25°C, unless otherwise noted)

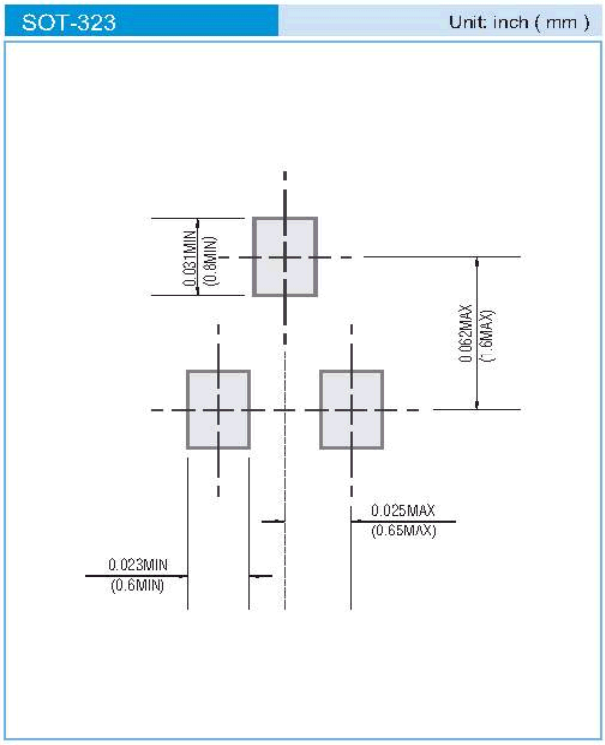
PARAMETER	SYMBOL	Test Condition	MIN.	TYP.	MAX.	UNIT
Collector - Emitter Breakdown Voltage	$V_{(BR)}CE0$	I_C=-10mA, I_B=0	-60	-	-	V
Collector - Base Breakdown Voltage	$V_{(BR)}CB0$	I_C=-10uA, I_E=0	-60	-	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)}EB0$	I_E=-10uA, I_C=0	-5.0	-	-	V
Base Cutoff Current	I_{BL}	V_{CE}=-30V, V_{EB}=-0.5V	-	-	-50	nA
Collector Cutoff Current	I_{CEX}	V_{CE}=-30V, V_{EB}=-0.5V	-	-	-50	nA
	I_{CBO}	V_{CE}=-50V, I_E=0	-	-	-10	nA
		V_{CE}=-50V, I_E=0 T_J=125°C	-	-	-10	uA
DC Current Gain	h_{FE}	I_C=-0.1mA, V_{CE}=-10V	75	-	-	
		I_C=-1.0mA, V_{CE}=-10V	100	-	-	
		I_C=-10mA, V_{CE}=-10V	100	-	-	
		I_C=-150mA, V_{CE}=-10V	100	-	300	
		I_C=-500mA, V_{CE}=-10V	50	-	-	
Collector - Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-150mA, I_B=-15 mA	-	-	-0.4	V
		I_C=-500mA, I_B=-50mA	-	-	-1.6	
Base - Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=-150mA, I_B=-15mA	-	-	-1.3	V
		I_C=-500mA, I_B=-50mA	-	-	-2.6	
Collector - Base Capacitance	C_{CBO}	V_{CB}=-10V, I_E=0, f=1MHz	-	-	8.0	pF
Emitter - Base Capacitance	C_{EBO}	V_{CB}=-2V, I_C=0, f=1MHz	-	-	30	pF
Current Gain – Bandwidth Product	F_T	I_C=-50mA, V_{CE}=-20V, f=100MHz	200	-	-	MHz
Turn-On Time	t_{on}	V_{CC}=-30V, V_{BE}=-0.5V, I_C=-150mA, I_B=-15mA	-	-	45	ns
Delay Time	t_d	V_{CC}=-30V, V_{BE}=-0.5V, I_C=-150mA, I_B=-15mA	-	-	10	ns
Rise Time	t_r	V_{CC}=-30V, V_{BE}=-0.5V, I_C=-150mA, I_{B1}=-15mA	-	-	40	ns
Turn-Off Time	t_{off}	V_{CC}=-6V, I_C=-150mA, I_{B1}=I_{B2}=-15mA	-	-	100	ns
Storage Time	t_s	V_{CC}=-6V, I_C=-150mA, I_{B1}=I_{B2}=-15mA	-	-	80	ns
Fall Time	t_f	V_{CC}=-6V, I_C=-150mA, I_{B1}=I_{B2}=-15mA	-	-	30	ns

SWITCHING TIME EQUIVALENT TEST CIRCUITS

ELECTRICAL CHARACTERISTICS CURVES

All Curves TBD

MOUNTING PAD LAYOUT



ORDER INFORMATION (Note L)

Device , package , shipping

LEGAL STATEMENT(Note M)