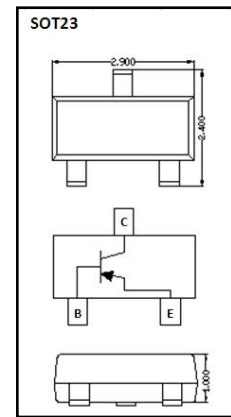


## DATA SHEET

### MMBT2907A

- ◇ Capable of 250mWatts of Power Dissipation and 200mA  $I_c$
- ◇ Operating and Storage Junction Temperatures:  $-55^{\circ}\text{C}$  to  $150^{\circ}\text{C}$
- ◇ Surface Mount SOT-23 Package
- ◇ RoHS compliant / Green EMC

Device Marking Code	
MMBT2907A	2F



#### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

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	-600	mA
$P_c$	Collector Power Dissipation	250	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	500	$^{\circ}\text{C}/\text{W}$
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	$-55 \sim +150$	$^{\circ}\text{C}$

#### ELECTRICAL CHARACTERISTICS @ $25^{\circ}\text{C}$ Unless Otherwise Specified

Symbol	Parameter	Test Conditions	Min	Max	Units
$V_{CEO}$	Collector-Emitter Breakdown Voltage	$I_c = -10\text{mA}, I_B = 0$	-60		V
$V_{CBO}$	Collector-Base Breakdown Voltage	$I_c = -10\mu\text{A}, I_E = 0$	-60		V
$V_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\mu\text{A}, I_c = 0$	-5.0		V
$I_{BL}$	Base Cutoff Current	$V_{CE} = -30\text{V}, V_{BE} = -0.5\text{V}$		-50	nA
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -50\text{V}, I_E = 0\text{V}$		-100	nA

$I_{CEX}$	Collector Cutoff Current	$V_{CE}=-30V, V_{BE}=-0.5V$		-50	nA
$h_{FE}$	DC Current Gain	$I_C=-0.1mA, V_{CE}=-10V$ $I_C=-1.0mA, V_{CE}=-10V$ $I_C=-10mA, V_{CE}=-10V$ $I_C=-150mA, V_{CE}=-10V$ $I_C=-500mA, V_{CE}=-10V$	75 100 100 100 50	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=-150mA, I_B=-15mA$ $I_C=-500mA, I_B=-50mA$		-0.4 -1.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=-150mA, I_B=-15mA$ $I_C=-500mA, I_B=-50mA$		-1.3 -2.6	V
$f_T$	Current Gain-Bandwidth Product	$I_C=-50mA,$ $V_{CE}=-20V, f=100MHz$	200		MHZ
$C_{obo}$	Output Capacitance	$V_{CB}=-10V, I_E=0, f=1.0MHz$		8.0	PF
$C_{ibo}$	Input Capacitance	$V_{BE}=-2.0V, I_C=0, f=1.0MHz$		30	PF

### SWITCHING CHARACTERISTICS

Symbol	Parameter	Test Conditions	Min	Max	Units
$t_d$	Delay Time	$V_{CC}=-3.0V,$		10	ns
$t_r$	Rise Time	$I_C=-150mA, I_{B1}=-15mA$		40	ns
$t_s$	Storage Time	$V_{CC}=-3.0V, I_C=-150mA$		80	ns
$t_f$	Fall Time	$I_{B1}=I_{B2}=-15mA$		30	ns

### ORDERING INFORMATION

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
MMB2907A	SOT23	Tape & Reel 3000pcs /7" Reel	8mm	4mm	Conductive	

### PACKAGE DIMENSIONS

