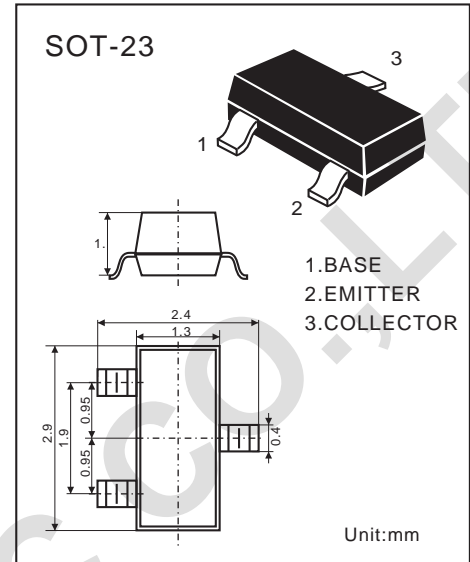


### NPN EPITAXIAL SILICON TRANSISTOR

**2W OUTPUT AMPLIFIER OF PORTABLE  
RADIO IN CLASS  
B PUSH-PULL OPERATION**

- Complement to MMPT8550LT1
- Collector Current:  $I_C=500\text{mA}$
- Collector Dissipation:  $P_C=225\text{mW}(T_C=25^\circ\text{C})$



#### ABSOLUTE MAXIMUM RATINGS

( $T_a=25^\circ\text{C}$ )

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	40	V
Collector-Emitter Voltage	$V_{CE0}$	25	V
Emitter-Base Voltage	$V_{EB0}$	6	V
Collector Current	$I_C$	500	mA
Collector Dissipation $T_a=25^\circ\text{C}^*$	$P_D$	225	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55-150	$^\circ\text{C}$

#### Electrical Characteristics

( $T_a=25^\circ\text{C}$ )

Characteristic	Symbol	MIN.	TYP.	MAX.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$BV_{CB0}$	40			V	$I_C=100\mu\text{A}$ $I_E=0$
Collector-Emitter Breakdown Voltage#	$BV_{CE0}$	25			V	$I_C=1\text{mA}$ $I_B=0$
Emitter-Base Breakdown Voltage	$BV_{EB0}$	6			V	$I_E=100\mu\text{A}$ $I_C=0$
Collector Cutoff Current	$I_{CBO}$			100	nA	$V_{CB}=35\text{V}$ , $I_E=0$
Emitter Cutoff Current	$I_{EBO}$			100	nA	$V_{EB}=6\text{V}$ , $I_C=0$
DC Current Gain	$h_{FE1}$	45				$V_{CE}=1\text{V}$ , $I_C=5\text{mA}$
DC Current Gain	$h_{FE2}$	85	160	300		$V_{CE}=1\text{V}$ , $I_C=50\text{mA}$
DC Current Gain	$h_{FE3}$	30				$V_{CE}=1\text{V}$ , $I_C=500\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.28	0.5	V	$I_C=500\text{mA}$ , $I_B=50\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		0.98	1.2	V	$I_C=500\text{mA}$ , $I_B=50\text{mA}$
Base-Emitter Voltage	$V_{BE}$		0.66	1	V	$I_{CE}=1\text{V}$ , $I_C=10\text{mA}$
Output Capacitance	$C_{ob}$		9		PF	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$
Current Gain-Bandwidth Product	$f_T$	100	190		MHZ	$V_{CE}=10\text{V}$ , $I_C=50\text{mA}$

\*Total Device Dissipation:FR=1X0.75X0.062 in Board ,Derate  $25^\circ\text{C}$

#Pulse Test: Pulse Width  $\leq 300\mu\text{S}$  ,Duty cycle  $\leq 2\%$

MMBT8050LT1=A6

## Typical Characteristics

