



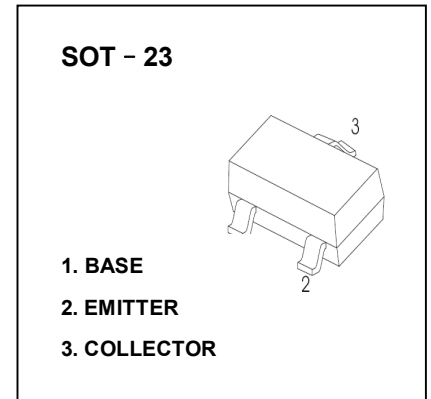
**SOT-23 Plastic-Encapsulate Transistors**

**MMBTA56** TRANSISTOR (PNP)

**FEATURES**

- General Purpose Amplifier Applications

**MARKING: 2GM**



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

Symbol	Parameter	Value	Unit
$V_{CB0}$	Collector-Base Voltage	-80	V
$V_{CEO}$	Collector-Emitter Voltage	-80	V
$V_{EBO}$	Emitter-Base Voltage	-4	V
$I_C$	Collector Current	-500	mA
$P_C$	Collector Power Dissipation	225	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	555	$^{\circ}\text{C}/\text{W}$
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^{\circ}\text{C}$

**ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$  unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	-80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-4			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-80\text{V}, I_E=0$			-0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE}=-60\text{V}, I_B=0$			-0.1	$\mu\text{A}$
Emitter-base breakdown voltage	$I_{EBO}$	$V_{EB}=-4\text{V}, I_C=0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=-1\text{V}, I_C=-10\text{mA}$	100		400	
	$h_{FE(2)}$	$V_{CE}=-1\text{V}, I_C=-100\text{mA}$	100			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}, I_B=-10\text{mA}$			-0.25	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=-1\text{V}, I_C=-100\text{mA}$			-1.2	V
Transition frequency	$f_T$	$V_{CE}=-1\text{V}, I_C=-100\text{mA}, f=100\text{MHz}$	50			MHz