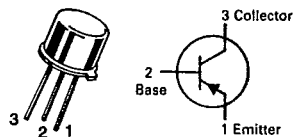


# MM5005 thru MM5007

CASE 79-04, STYLE 1  
TO-39 (TO-205AD)



**AUDIO TRANSISTORS**

**PNP SILICON**

## MAXIMUM RATINGS

Rating	Symbol	MM5005	MM5006	MM5007	Unit
Collector-Emitter Voltage	$V_{CE0}$	60	80	100	Vdc
Collector-Base Voltage	$V_{CBO}$	80	100	120	Vdc
Emitter-Base Voltage	$V_{EBO}$	5.0			Vdc
Collector Current — Continuous	$I_C$	2.0			Adc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	1.5 8.67			Watts mW/°C
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	8.0 45.7			Watts mW/°C
Operating and Storage Junction Temperature Range	$T_J, T_{stg}$	-65 to +200			°C

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Collector-Emitter Breakdown Voltage(1) ( $I_C = 10 \text{ mAdc}, I_E = 0$ )	$V_{(BR)CEO}$	60 80 100	—	Vdc
Collector-Base Breakdown Voltage ( $I_C = 100 \mu\text{Adc}, I_E = 0$ )	$V_{(BR)CBO}$	80 100 120	—	Vdc
Emitter-Base Breakdown Voltage ( $I_E = 100 \mu\text{Adc}, I_C = 0$ )	$V_{(BR)EBO}$	5.0	—	Vdc
Collector Cutoff Current ( $V_{CB} = 60 \text{ Vdc}, I_E = 0$ ) ( $V_{CB} = 80 \text{ Vdc}, I_E = 0$ ) ( $V_{CB} = 100 \text{ Vdc}, I_E = 0$ )	$I_{CBO}$	—	200 200 200	nAdc
Emitter Cutoff Current ( $V_{EB} = 4.0 \text{ Vdc}, I_C = 0$ )	$I_{EBO}$	—	100	nAdc
<b>ON CHARACTERISTICS</b>				
DC Current Gain ( $I_C = 1.0 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$ ) ( $I_C = 150 \text{ mAdc}, V_{CE} = 2.5 \text{ Vdc}$ ) ( $I_C = 200 \text{ mAdc}, V_{CE} = 2.5 \text{ Vdc}$ ) ( $I_C = 250 \text{ mAdc}, V_{CE} = 2.5 \text{ Vdc}$ )	$h_{FE}$	40 50 50 50	— 250 250 250	—
Collector-Emitter Saturation Voltage ( $I_C = 150 \text{ mAdc}, I_B = 15 \text{ mAdc}$ )	$V_{CE(sat)}$	—	0.5	Vdc
Base-Emitter On Voltage ( $I_C = 150 \text{ mAdc}, V_{CE} = 2.5 \text{ Vdc}$ )	$V_{BE(on)}$	0.65	0.8	Vdc
<b>SMALL-SIGNAL CHARACTERISTICS</b>				
Current-Gain — Bandwidth Product(1) ( $I_C = 50 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 20 \text{ MHz}$ )	$f_T$	30	—	MHz
Output Capacitance ( $V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 100 \text{ kHz}$ )	$C_{obo}$	www.DataSheet4U.com		

(1) Pulse Test: Pulse Width  $\leq 300 \mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .