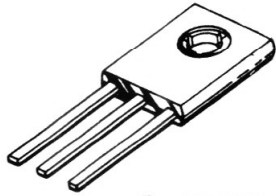


MJE340 (SILICON)



CASE 77

NPN silicon power transistor designed for power output stages for television, radio, phonograph and other consumer product applications.

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MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	300	Vdc
Emitter-Base Voltage	V_{EB}	3.0	Vdc
Collector Current - Continuous	I_C	500	mAdc
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	20.8 167	Watts mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Thermal Resistance, Junction to Case	θ_{JC}	6.0	$^\circ\text{C}/\text{W}$

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

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage ($I_C = 1.0 \text{ mAdc}, I_B = 0$)	BV_{CEO}	300	-	Vdc
Collector Cutoff Current ($V_{CB} = 300 \text{ Vdc}, I_E = 0$)	I_{CBO}	-	100	μAdc
Emitter Cutoff Current ($V_{BE} = 3.0 \text{ Vdc}, I_C = 0$)	I_{EBO}	-	100	μAdc

ON CHARACTERISTICS

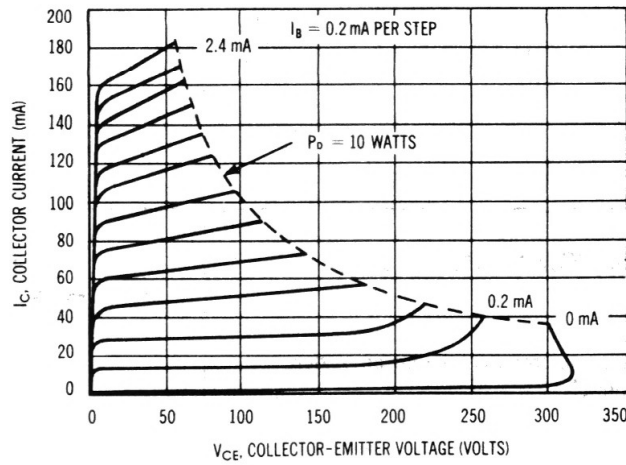
DC Current Gain ($I_C = 50 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$)	h_{FE}	30	240	-
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DYNAMIC CHARACTERISTICS

Current-Gain-Bandwidth Product ($I_C = 100 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ MHz}$)	f_T	10	-	MHz
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MJE340 (continued)

FIGURE 1 — COLLECTOR CHARACTERISTICS



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FIGURE 2 — COLLECTOR CURRENT versus BASE-EMITTER VOLTAGE

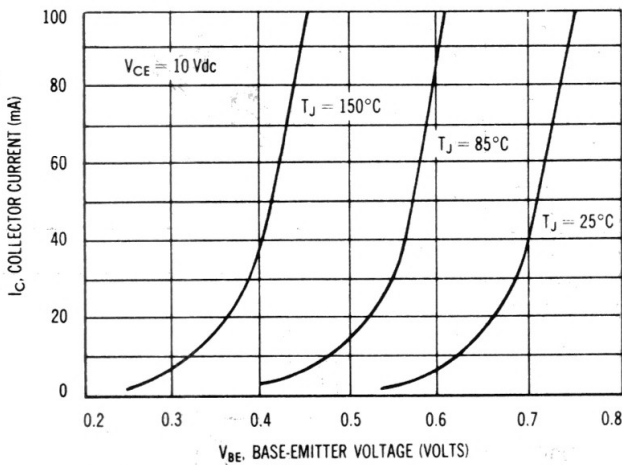


FIGURE 3 — TYPICAL LINE-OPERATED 1.5-WATT AUDIO AMPLIFIER

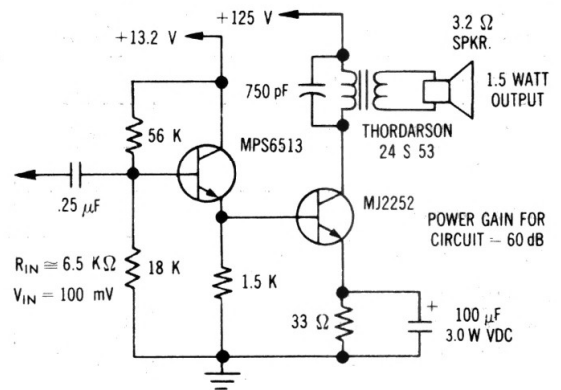


FIGURE 4 — TYPICAL TOTAL HARMONIC DISTORTION versus P_{out}

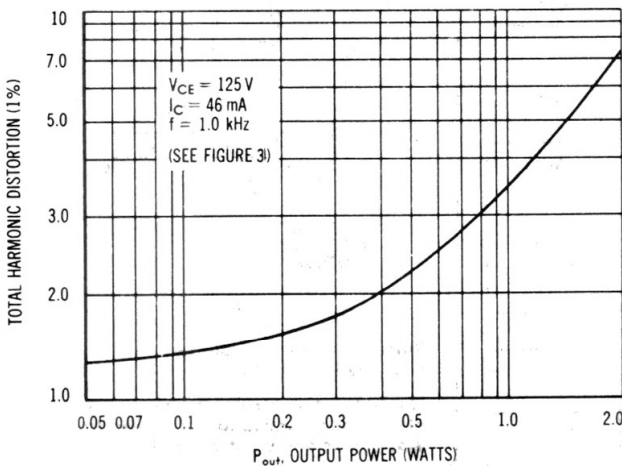


FIGURE 5 — TYPICAL FREQUENCY RESPONSE OF LINE OPERATED AUDIO AMPLIFIER

