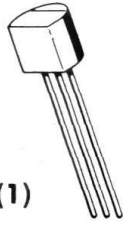


MPS6512 thru MPS6515 (SILICON)
MPS6520
MPS6521

CASE 29(1)
(TO-92)

NPN silicon transistors designed for use in general-purpose audio and low-frequency amplifier applications. Types MPS6520 and MPS6521 are particularly suited for low-noise applications.

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

Rating	Symbol	MPS6512 MPS6513	MPS6514 MPS6515 MPS6520 MPS6521	Unit
Collector-Base Voltage	V_{CB}	40	40	Volts
Collector-Emitter Voltage	V_{CEO}	30	25	Volts
Emitter-Base Voltage	V_{EB}	4.0		Volts
Collector Current	I_C	100		mA
Total Device Dissipation @ $T_A = 60^\circ\text{C}$ @ $T_A = 25^\circ\text{C}$	P_D	210 310		mW
Junction Temperature	T_J	135		$^\circ\text{C}$

THERMAL RESISTANCE $\theta_{JA(\text{air})} = 0.357^\circ\text{C/mW}$

MPS6512 thru MPS6515, MPS 6520, MPS 6521 (continued)

COLLECTOR CHARACTERISTICS — COMMON EMITTER

FIGURE 3 — MPS6512

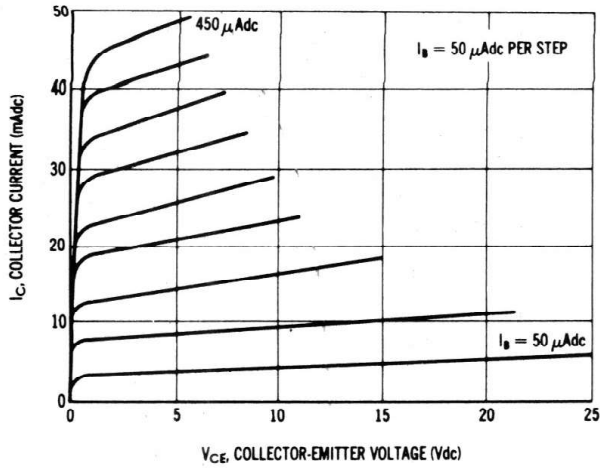


FIGURE 4 — MPS6513

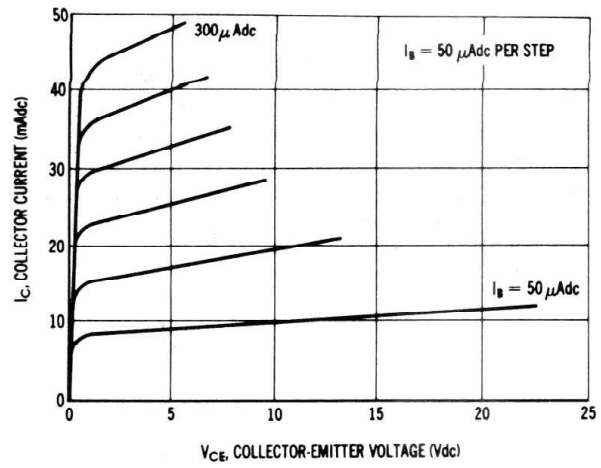


FIGURE 5 — MPS6514, MPS6520

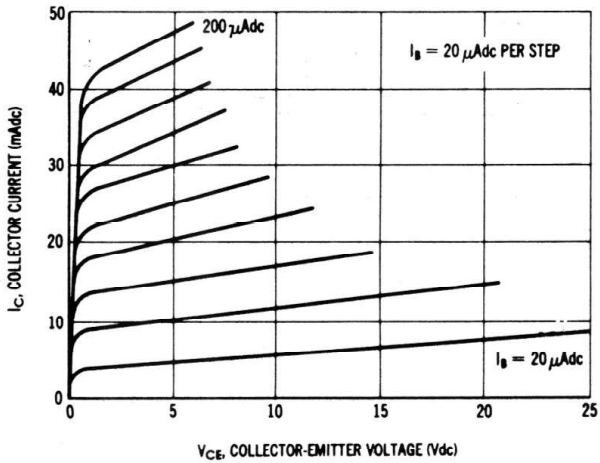


FIGURE 6 — MPS6515, MPS6521

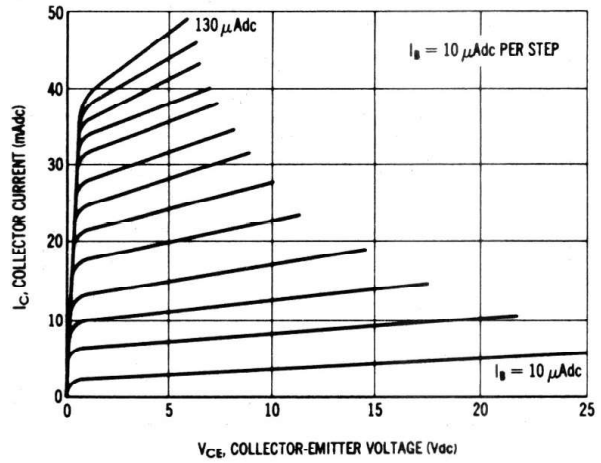


FIGURE 7 — SPOT NOISE FIGURE versus FREQUENCY

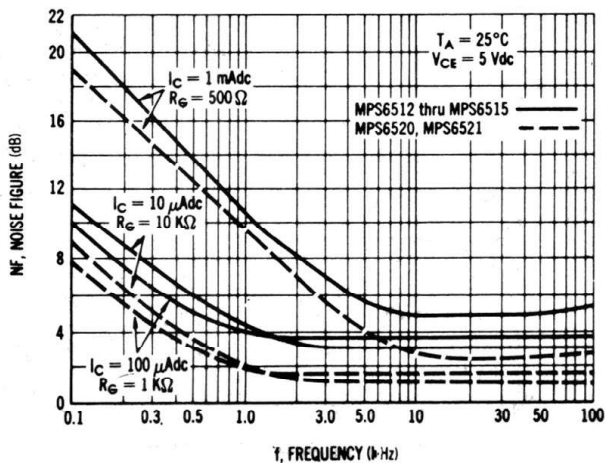
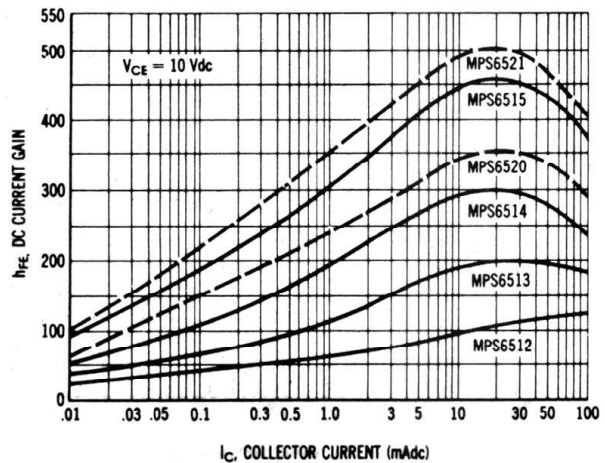


FIGURE 8 — DC CURRENT GAIN versus COLLECTOR CURRENT



MPS6512 thru MPS6515, MPS6520, MPS6521 (continued)

h PARAMETER VARIATIONS
($f = 1 \text{ MHz}$, $T_A = 25^\circ\text{C}$)

FIGURE 9 — INPUT IMPEDANCE versus COLLECTOR CURRENT

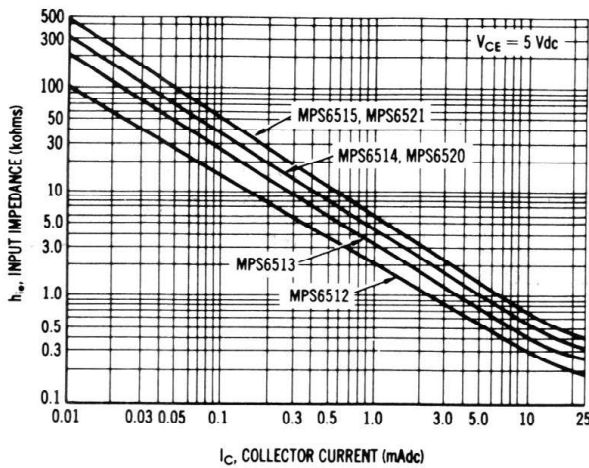


FIGURE 10 — REVERSE VOLTAGE TRANSFER RATIO versus COLLECTOR CURRENT

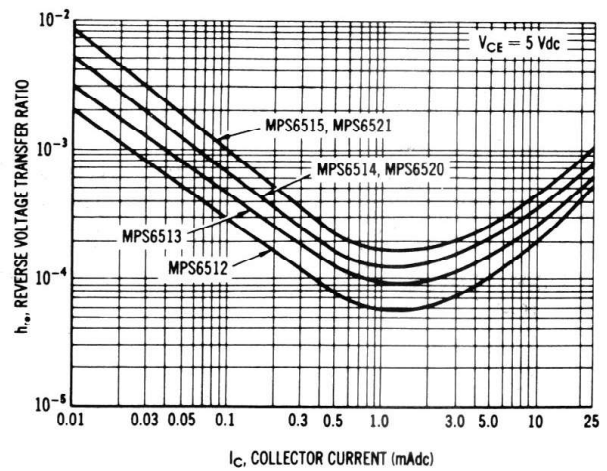


FIGURE 11 — SMALL SIGNAL CURRENT GAIN versus COLLECTOR CURRENT

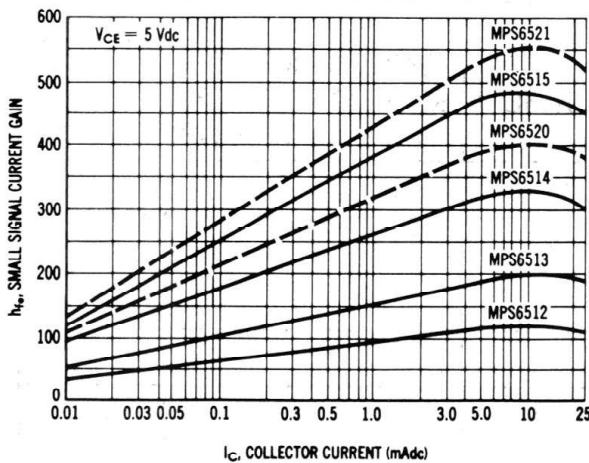


FIGURE 12 — OUTPUT ADMITTANCE versus COLLECTOR CURRENT

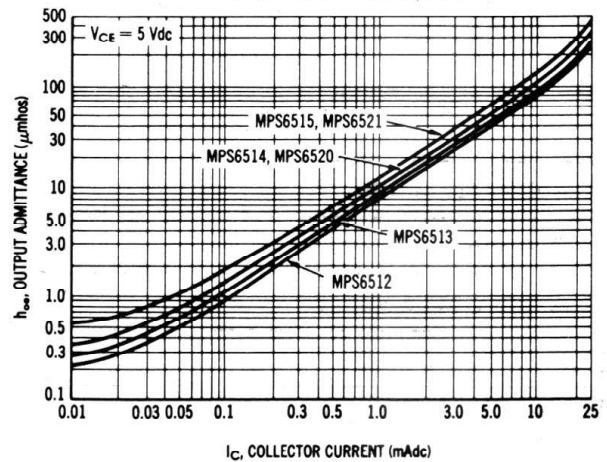


FIGURE 13 — GAIN — BANDWIDTH PRODUCT versus COLLECTOR CURRENT

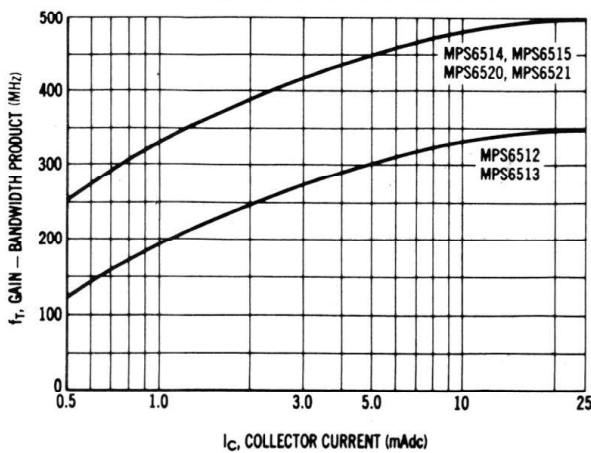


FIGURE 14 — COLLECTOR CURRENT versus BASE-EMITTER TURN-ON VOLTAGE

