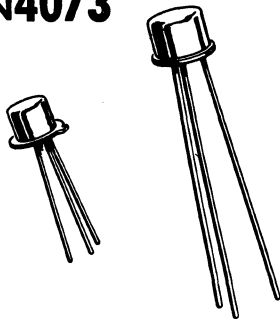


2N4072 (SILICON)
2N4073



NPN silicon annular transistors designed as amplifiers and drivers for large-signal VHF and UHF applications.

CASE 22
(TO-18)
2N4072

CASE 31
(TO-5)
2N4073

Collector connected to case

MAXIMUM RATINGS

Rating	Symbol	2N4072	2N4073	Unit
Collector-Emitter Voltage	V_{CEO}	20		Vdc
Collector-Base Voltage	V_{CB}	40		Vdc
Emitter-Base Voltage	V_{EB}	4.0		Vdc
Collector Current-Continuous	I_C	100	150	mAdc
Total Device Dissipation @ $T_A = 25^\circ\text{C}$ Derate Above 25°C	P_D	0.35 2.0	- -	Watt mW/ $^\circ\text{C}$
Total Device Dissipation @ $T_C = 25^\circ\text{C}$ Derate above 25°C	P_D	- -	1.5 8.57	Watts mW/ $^\circ\text{C}$
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-65 to +200		$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit
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STATIC CHARACTERISTICS

Collector-Emitter Sustaining Voltage ($I_C = 15\text{ mAdc}$, $I_E = 0$)	$BV_{CEO(sus)}$	20	-	-	Vdc
Collector-Base Breakdown Voltage ($I_C = 0.1\text{ mAdc}$, $I_E = 0$)	BV_{CBO}	40	-	-	Vdc
Emitter-Base Breakdown Voltage ($I_E = 0.1\text{ mAdc}$, $I_C = 0$)	BV_{EBO}	4.0	-	-	Vdc
Collector Cutoff Current ($V_{CB} = 15\text{ Vdc}$, $I_E = 0$) ($V_{CB} = 15\text{ Vdc}$, $I_E = 0$, $T_A = 150^\circ\text{C}$)	I_{CBO}	- -	- -	0.1 100	μAdc
DC Current Gain ($I_C = 25\text{ mAdc}$, $V_{CE} = 2\text{ Vdc}$)	h_{FE}	10	-	-	-

DYNAMIC CHARACTERISTICS

Current-Gain-Bandwidth Product ($I_C = 25\text{ mAdc}$, $V_{CE} = 10\text{ Vdc}$, $f = 100\text{ MHz}$)	f_T	-	550	-	MHz
Output Capacitance ($V_{CB} = 15\text{ Vdc}$, $I_E = 0$, $f = 100\text{ kHz}$)	C_{ob}	-	3.0	4.0	pF

2N4072, 2N4073 (continued)

ELECTRICAL CHARACTERISTICS (continued)

Characteristic		Symbol	Min	Typ	Max	Unit
Power Gain	2N4072	G_{PE}	10	-	-	dB
Power Output	Test Circuit - Figure 5 $P_{in} = 25\text{ mW}$, $V_{CE} = 13.6\text{ Vdc}$, $f = 175\text{ MHz}$	P_{out}	250	-	-	mW
Collector Efficiency		η	50	60	-	%
Power Gain	2N4073	G_{PE}	10	-	-	dB
Power Output	Test Circuit - Figure 5 $P_{in} = 50\text{ mW}$, $V_{CE} = 13.6\text{ Vdc}$, $f = 175\text{ MHz}$	P_{out}	500	650	-	mW
Collector Efficiency		η	50	65	-	%

2N4072

FIGURE 1 — POWER OUTPUT versus FREQUENCY

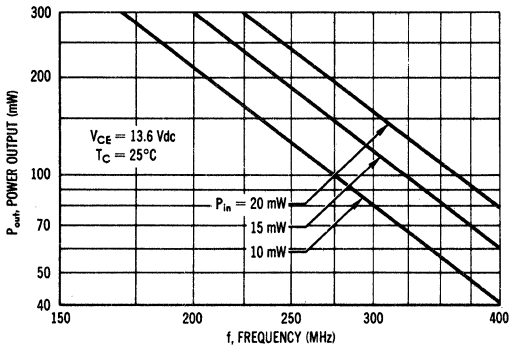
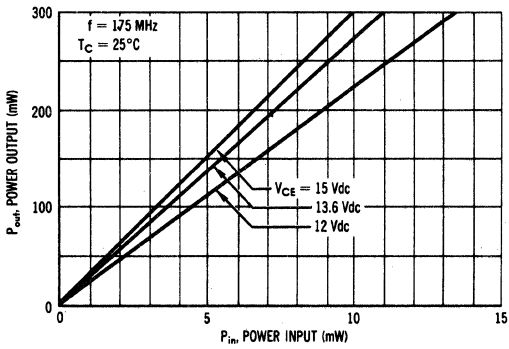


FIGURE 2 — POWER OUTPUT versus POWER INPUT



2N4073

FIGURE 3 — POWER OUTPUT versus FREQUENCY

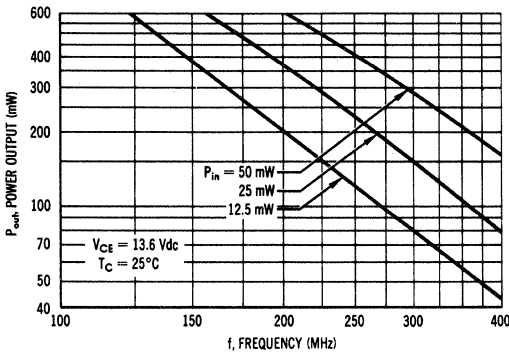


FIGURE 4 — POWER OUTPUT versus POWER INPUT

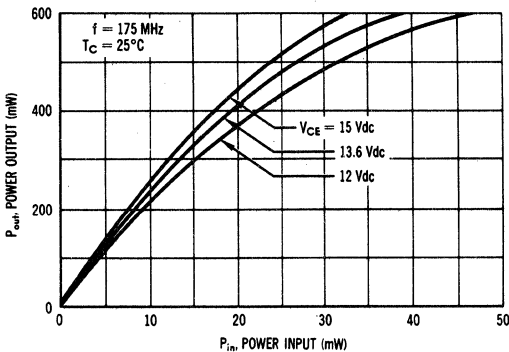


FIGURE 5 — 175 MHz TEST CIRCUIT

