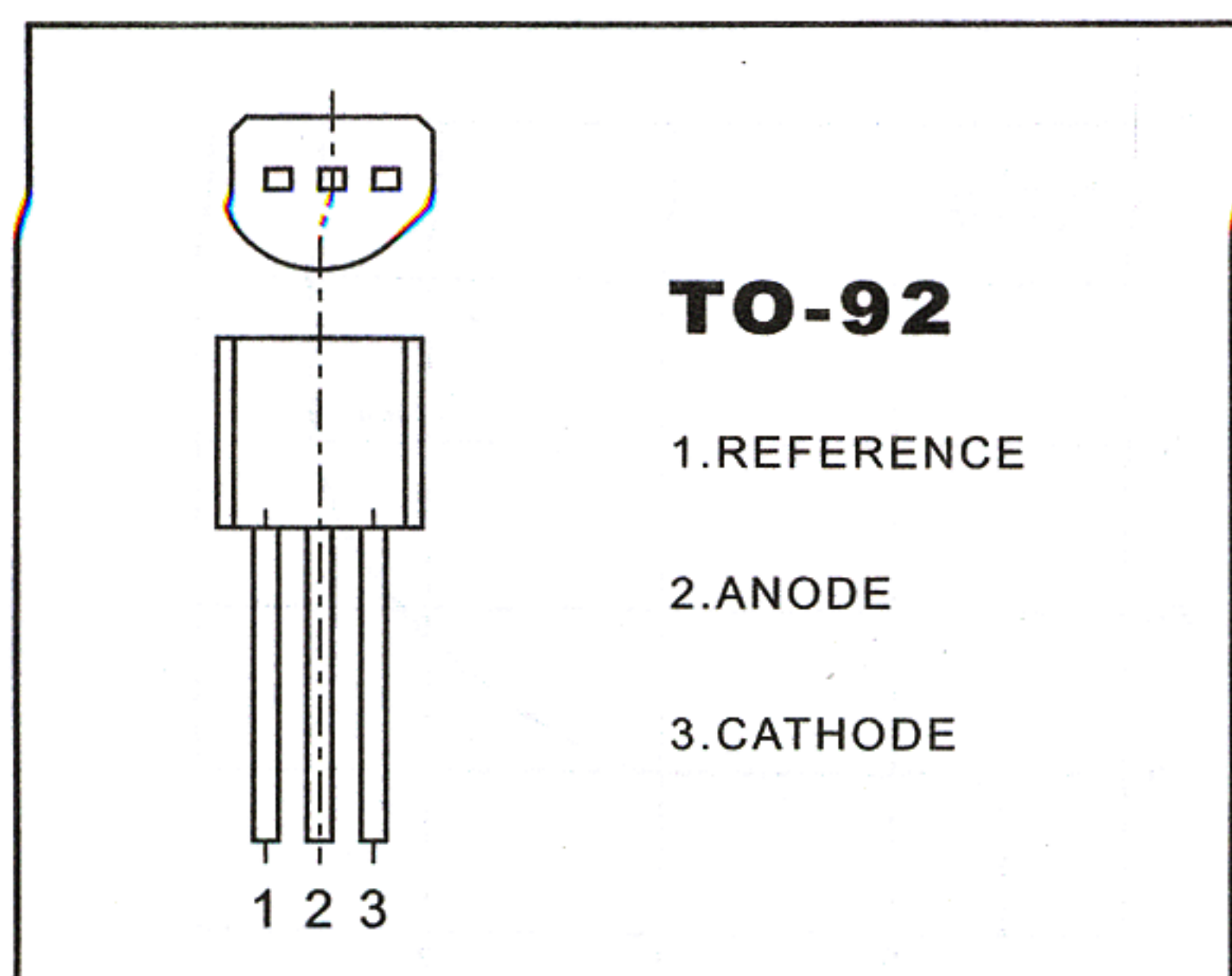


CJ431 ADJUSTABLE ACCURATE REFERENCE SOURCE



FEATURES

The output voltage can be adjusted to 36V

Low dynamic output impedance, its typical value is 0.2 Ω

Trapping current capability is 1 to 100mA

The typical value of the equivalent temperature factor in the whole temperature scope is 50 ppm/ $^{\circ}\text{C}$

The effective temperature compensation in the working range of full temperature

Low output noise volatge

Fast on-state response

ABSOLUTE MAXIMUM RATINGS

(Operating temperature range applies unless otherwise specified)

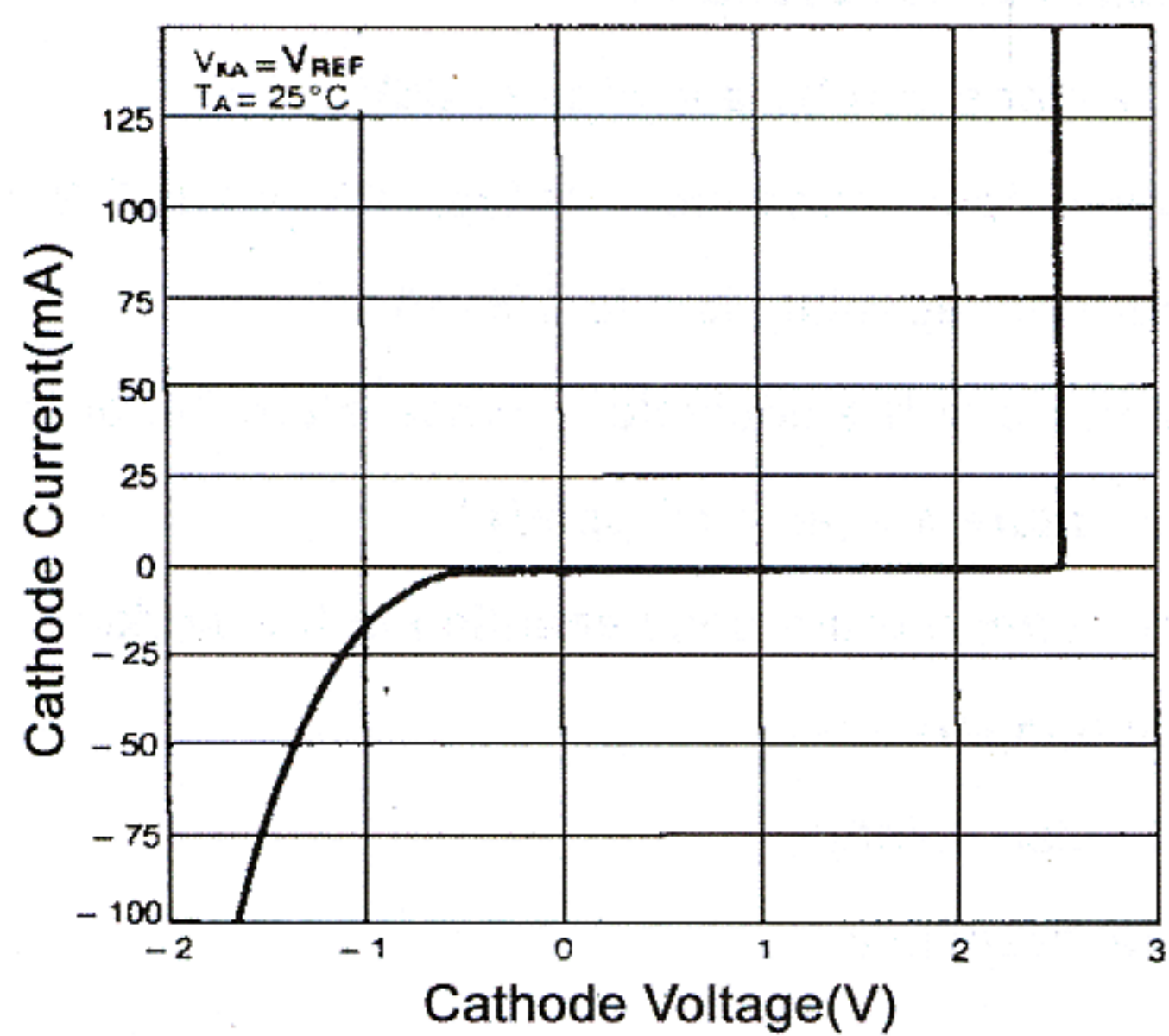
Parameter	Symbol	Value	Units
Cathode voltage	V_{KA}	37	V
Cathode current range(continuous)	I_{KA}	-100~+150	mA
Reference input current range	I_{ref}	0.05~+10	mA
Power dissipation	P_D	770	mW
Operating temperature	T_{opr}	0~70	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-65~+150 $^{\circ}\text{C}$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

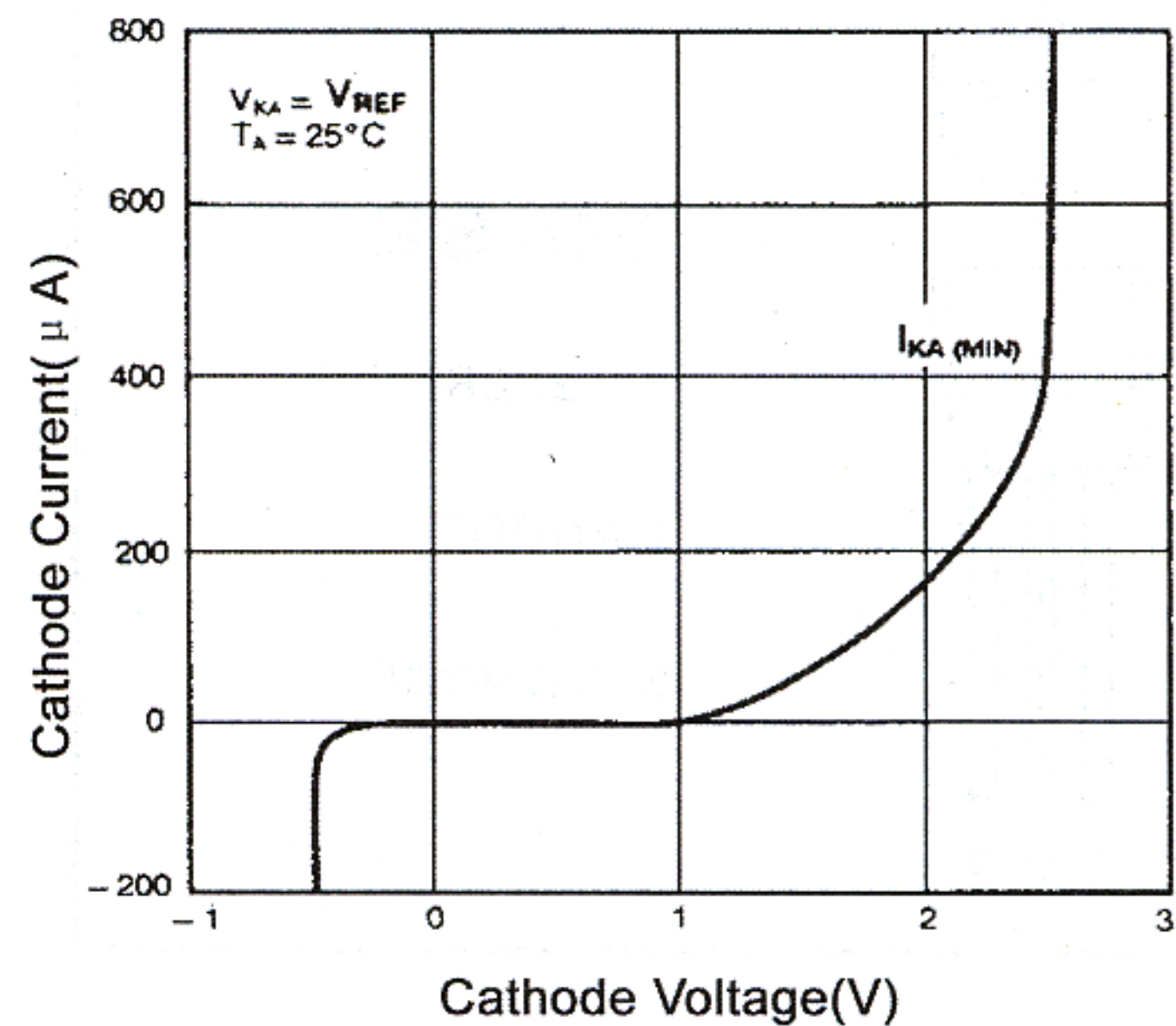
($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Reference Input voltage	V_{ref}	$V_{KA}=V_{ref}, I_{KA}=10\text{mA}$	2.440	2.495	2.550	V
Deviation fo reference input voltage Over temperature(note)	$\Delta V_{ref}/\Delta T$	$V_{KA}=V_{ref}, I_{KA}=10\text{mA}$ $T_{min} \leq T_a \leq T_{max}$		4.5	17	mV
Ratio of change in reference input Voltage to the change in cathode Voltage	$\Delta V_{ref}/\Delta V_{KA}$	$I_{KA}=10\text{mA}$ $\Delta V_{KA}=10\text{V} \sim V_{ref}$ $\Delta V_{KA}=36\text{V} \sim 10\text{V}$		-1.0 -0.5	-2.7 -2.0	mV/V
Reference Input current	I_{ref}	$I_{KA}=10\text{mA}, R_1=10\text{K}\Omega, R_2=\infty$		1.5	4	μA
Deviation of reference input current Over full temperature range	$\Delta I_{ref}/\Delta T$	$I_{KA}=10\text{mA}, R_1=10\text{K}\Omega, R_2=\infty$ $T_A=\text{full temperature}$		0.4	1.2	μA
Minimum cathode current for regulation	$I_{KA}(\text{min})$	$V_{KA}=V_{ref}$		0.45	1.0	mA
Off-state cathode current	$I_{KA}(\text{OFF})$	$V_{KA}=36\text{V}, V_{ref}=0$		0.05	1.0	μA
Dynamic impedance	Z_{KA}	$V_{KA}=V_{ref}, I_{KA}=1 \text{ to } 100\text{mA}$ $f \leq 1.0\text{KHZ}$		0.15	0.5	Ω

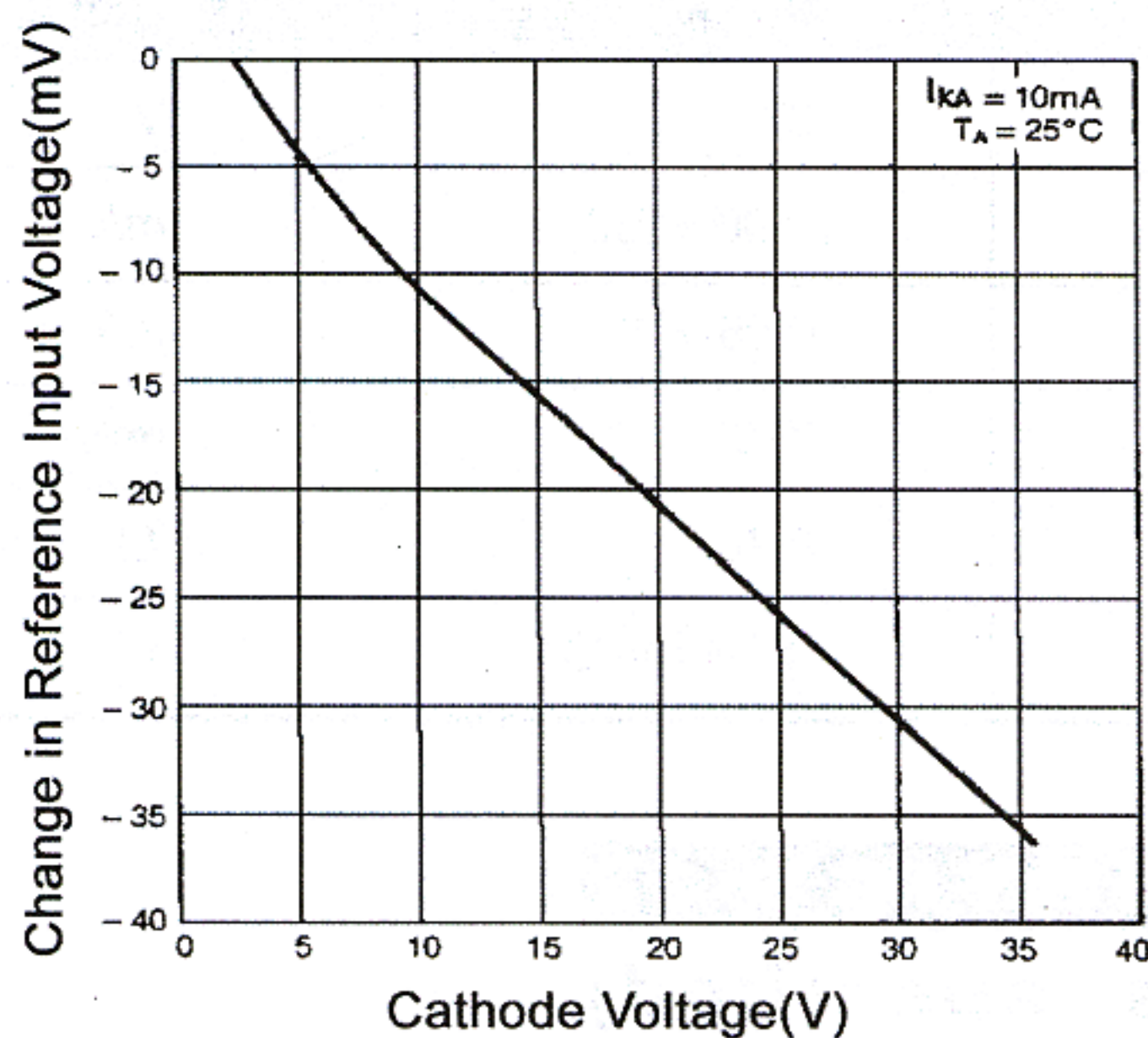
Note: $T_{MIN}=0^{\circ}\text{C}$, $T_{MAX}=+70^{\circ}\text{C}$



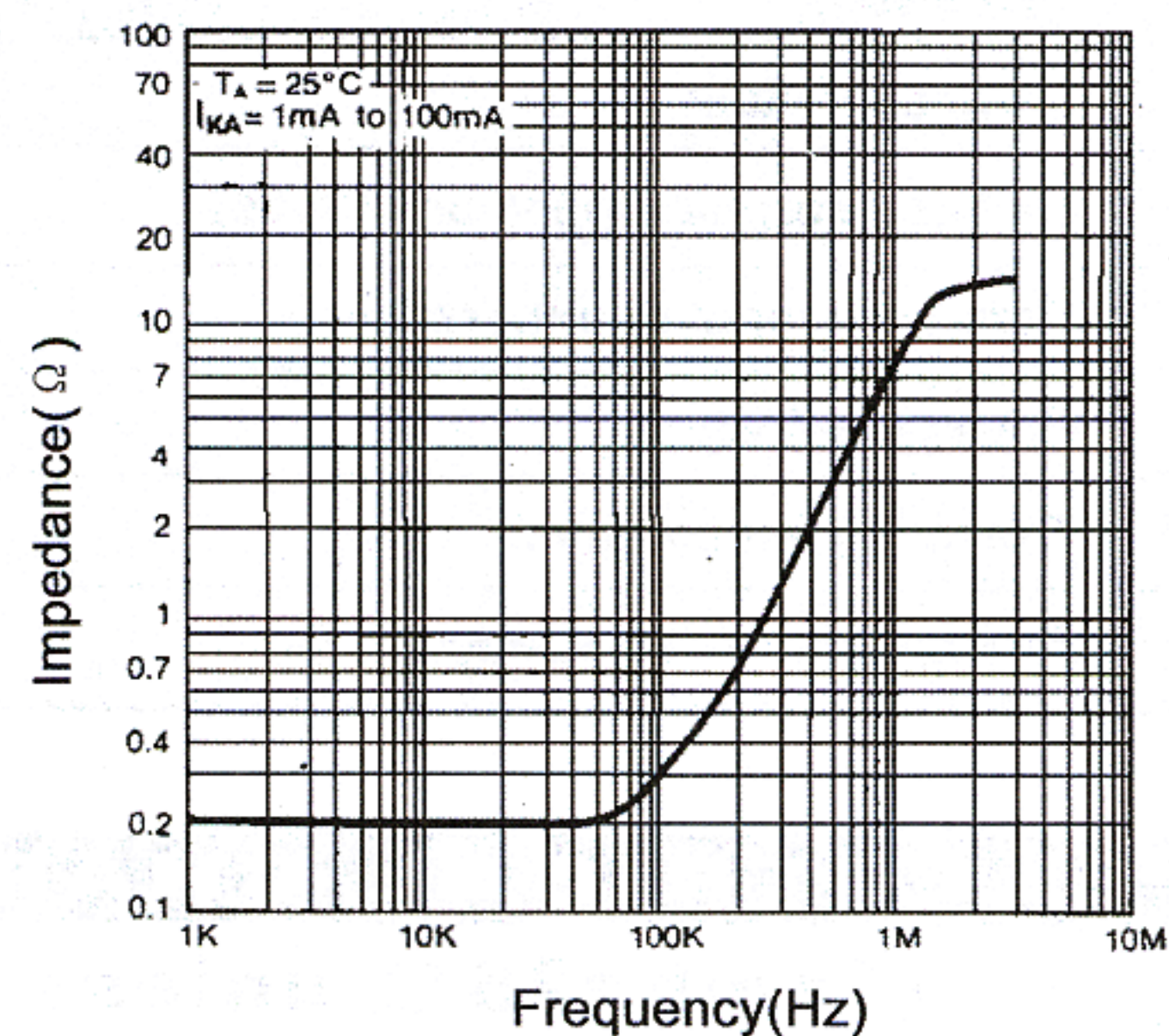
Cathode Current vs. Cathode Voltage



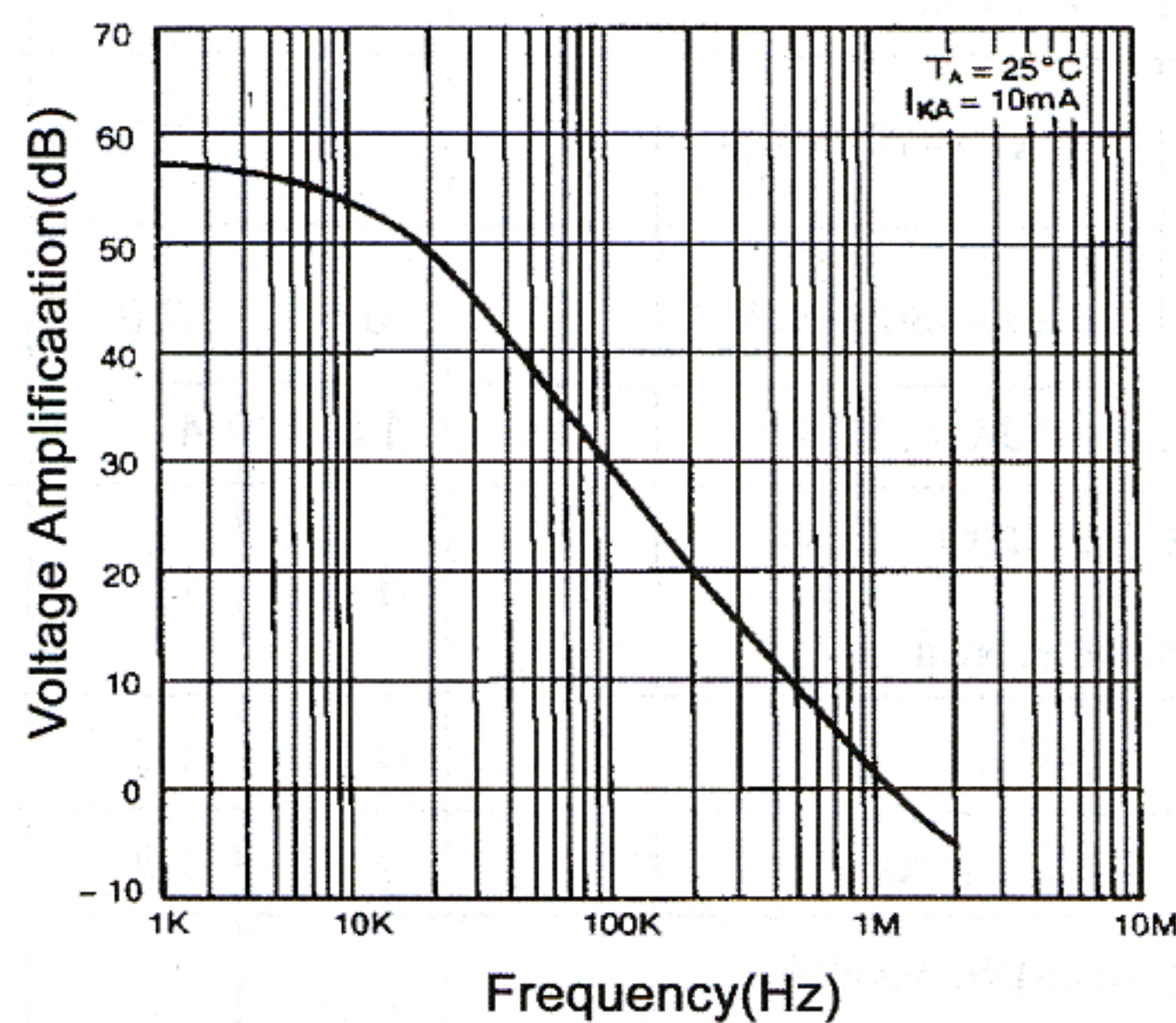
Cathode Current vs. Cathode Voltage



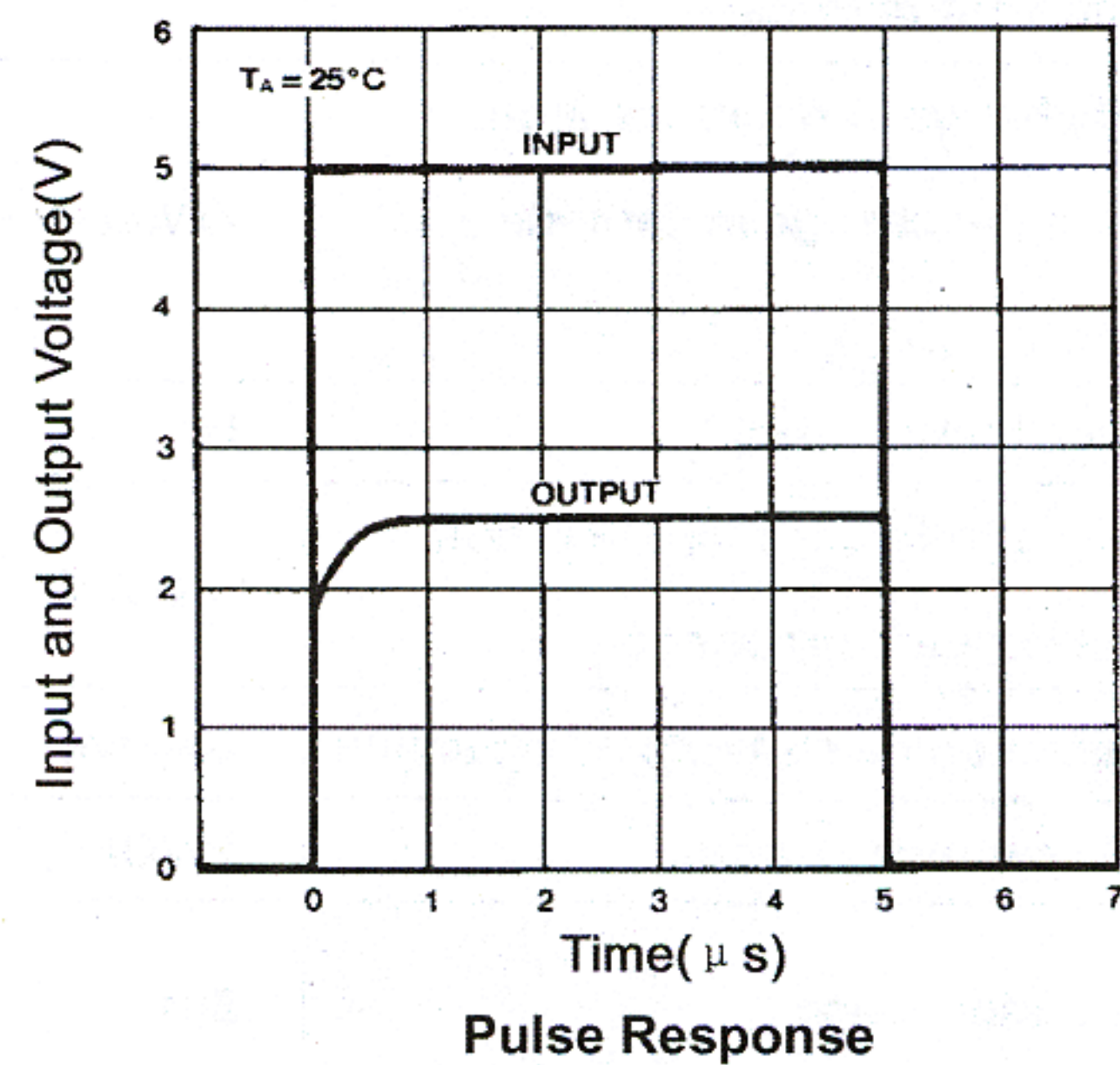
Change in Reference input voltage vs. Cathode Voltage



Dynamic Impedance Frequency



Small Signal Voltage Amplification vs. Frequency



Pulse Response