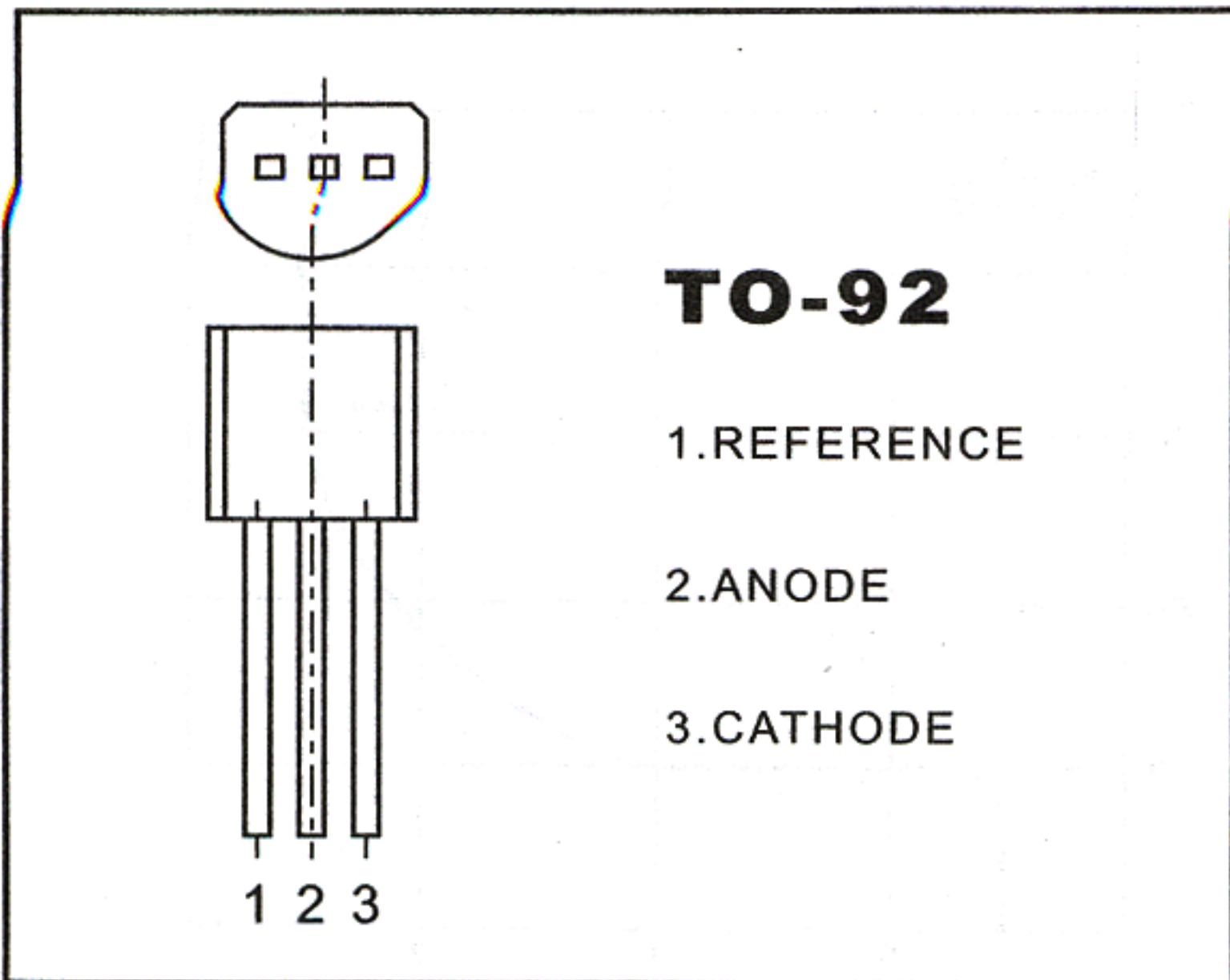


CJ431 ADJUSTABLE ACCURATE REFERENCE SOURCE



FEATURES

- The output voltage can be adjusted to 36V
- Low dynamic output impedance, its typical value is 0.2Ω
- Trapping current capability is 1 to 100mA
- The typical value of the equivalent temperature factor in the whole temperature scope is $50 \text{ ppm}/^\circ\text{C}$
- The effective temperature compensation in the working range of full temperature
- Low output noise voltage
- Fast on-state response

ABSOLUTE MAXIMUM RATINGS

(Operating temperature range applies unless otherwise specified)

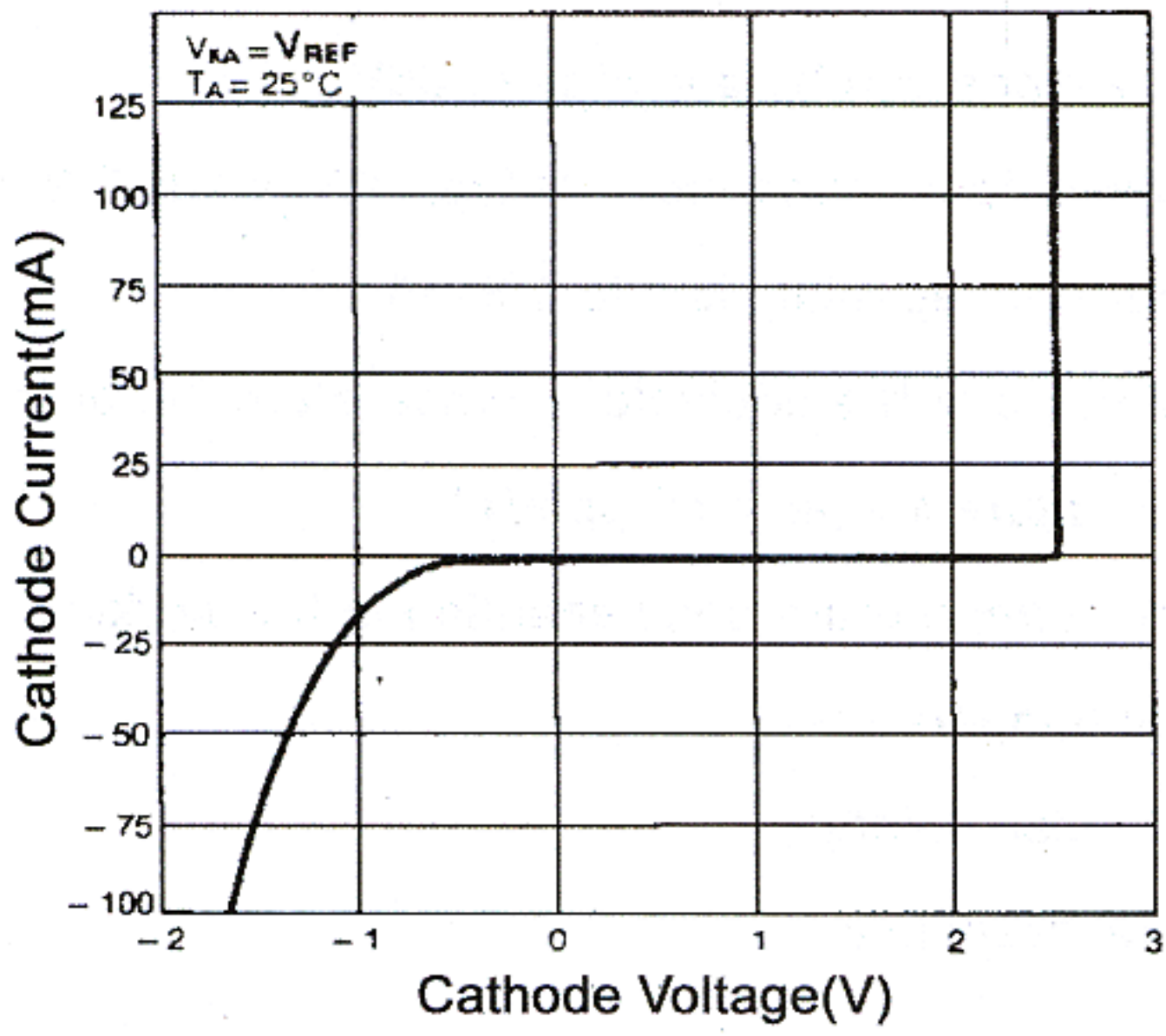
Parameter	Symbol	Value	Units
Cathode voltage	V _{KA}	37	V
Cathode current range(continuous)	I _{KA}	-100+150	mA
Reference input current range	I _{ref}	0.05+10	mA
Power dissipation	P _D	770	mW
Operating temperature	T _{opr}	0-70	°C
Storage temperature range	T _{stg}	-65+150°C	°C

ELECTRICAL CHARACTERISTICS

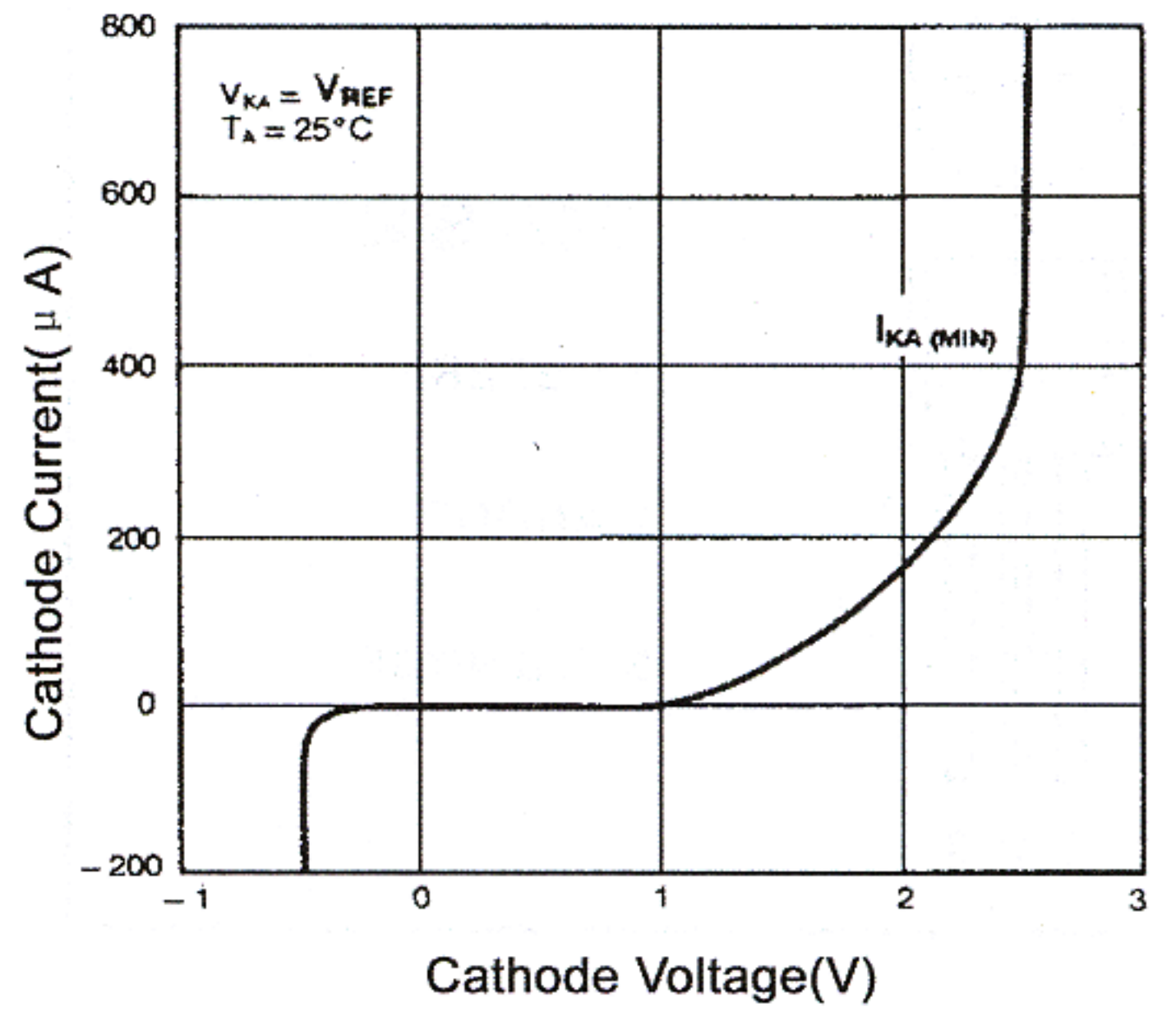
(T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Reference Input voltage	V _{ref}	V _{KA} =V _{ref} , I _{KA} =10mA	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} =10mA T _{min} ≤ T _a ≤ 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} =10mA $\Delta V_{KA}=10V \sim V_{ref}$		-1.0	-2.7	mV/V
		$\Delta V_{KA}=36V \sim 10V$		-0.5	-2.0	
Reference Input current	I _{ref}	I _{KA} =10mA, R ₁ =10K Ω , R ₂ =∞		1.5	4	μA
Deviation of reference input current Over full temperature range	$\Delta I_{ref}/\Delta T$	I _{KA} =10mA, R ₁ =10K Ω , R ₂ =∞ T _A =full temperature		0.4	1.2	μA
Minimum cathode current for regulation	I _{KA} (min)	V _{KA} =V _{ref}		0.45	1.0	mA
Off-state cathode current	I _{KA} (OFF)	V _{KA} =36V, V _{ref} =0		0.05	1.0	μA
Dynamic impedance	Z _{KA}	V _{KA} =V _{ref} , I _{KA} =1 to 100mA f ≤ 1.0KHZ		0.15	0.5	Ω

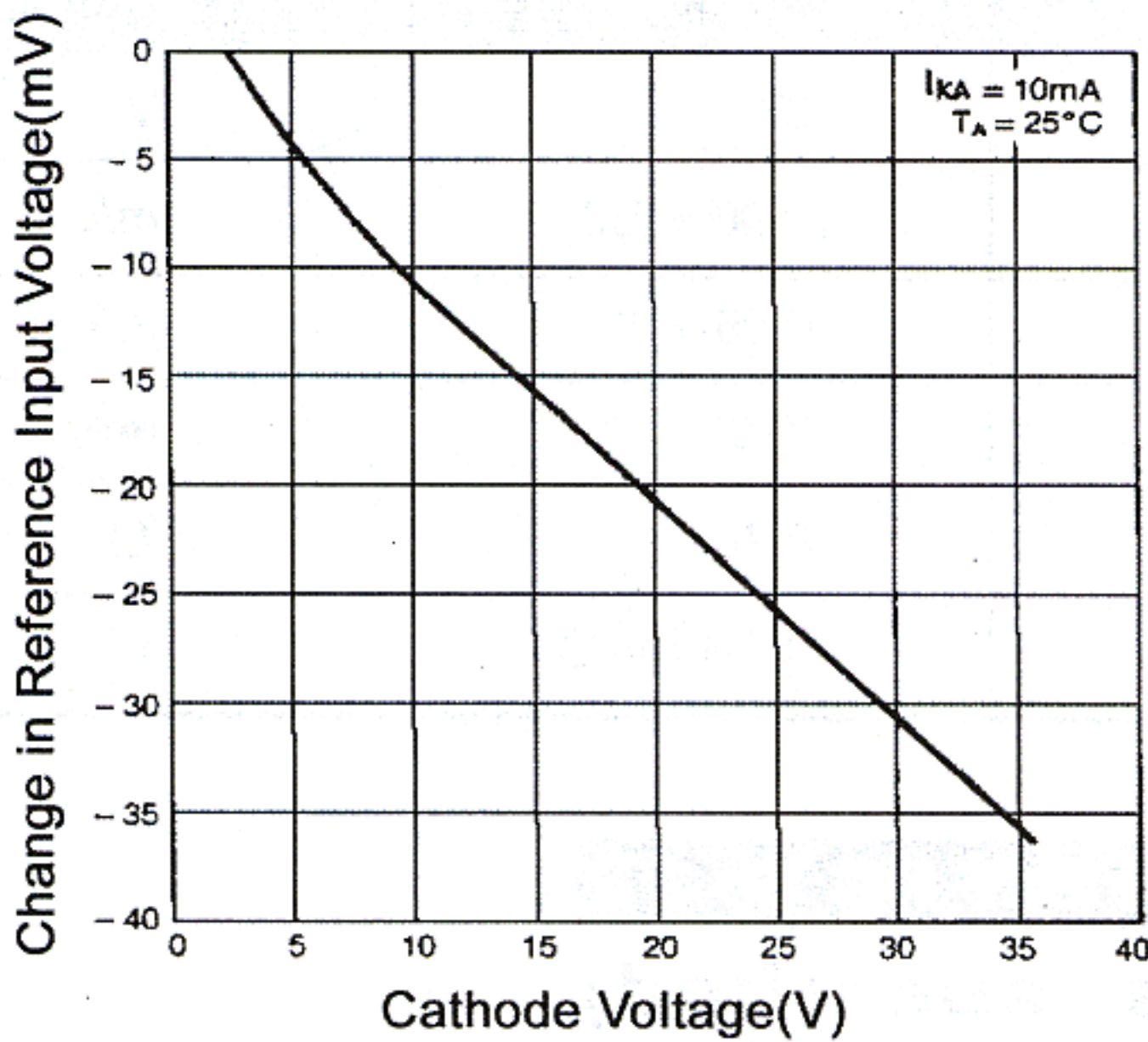
Note:T_{MIN}=0°C, T_{MAX}=+70°C



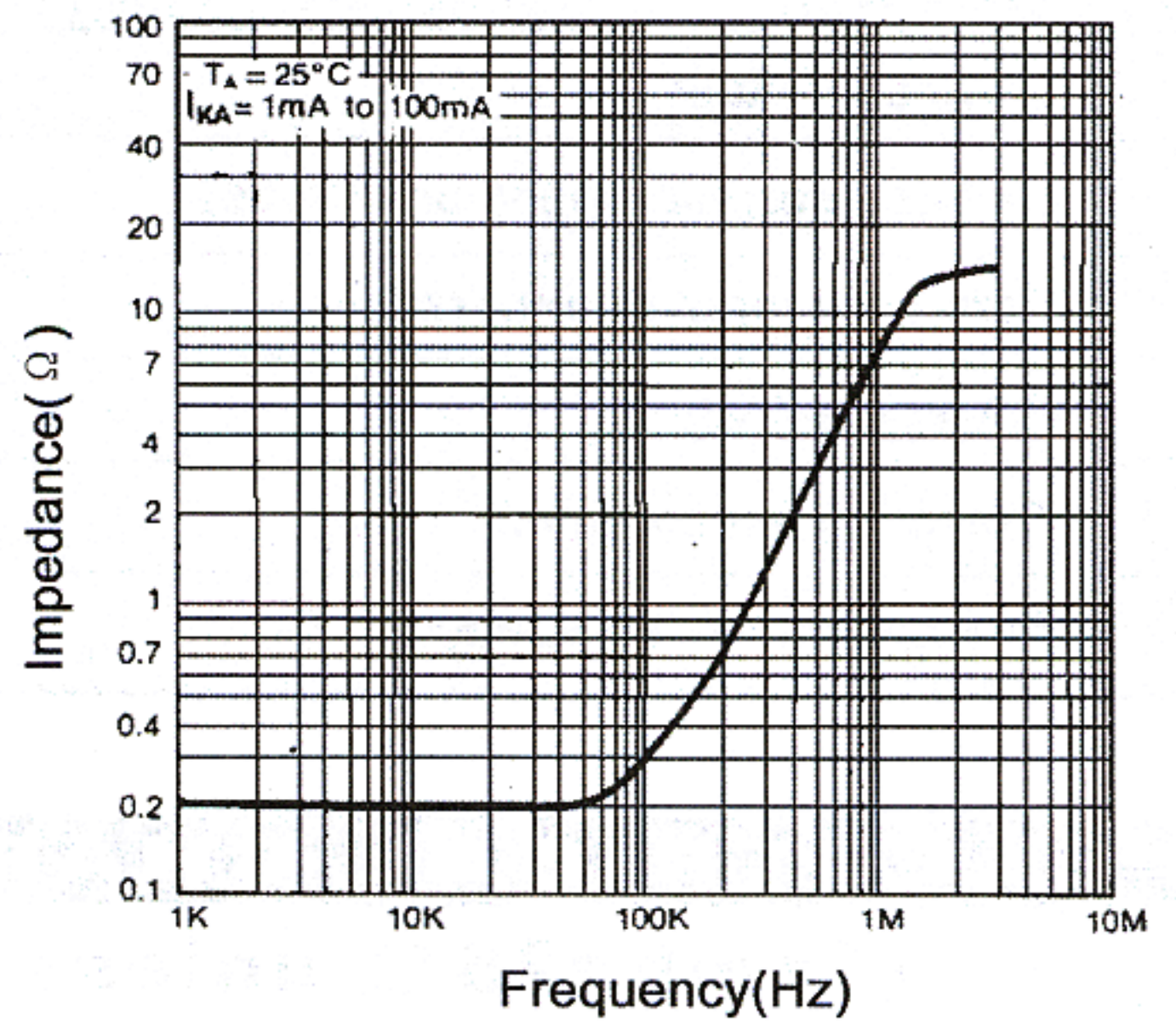
Cathode Current vs. Cathode Voltage



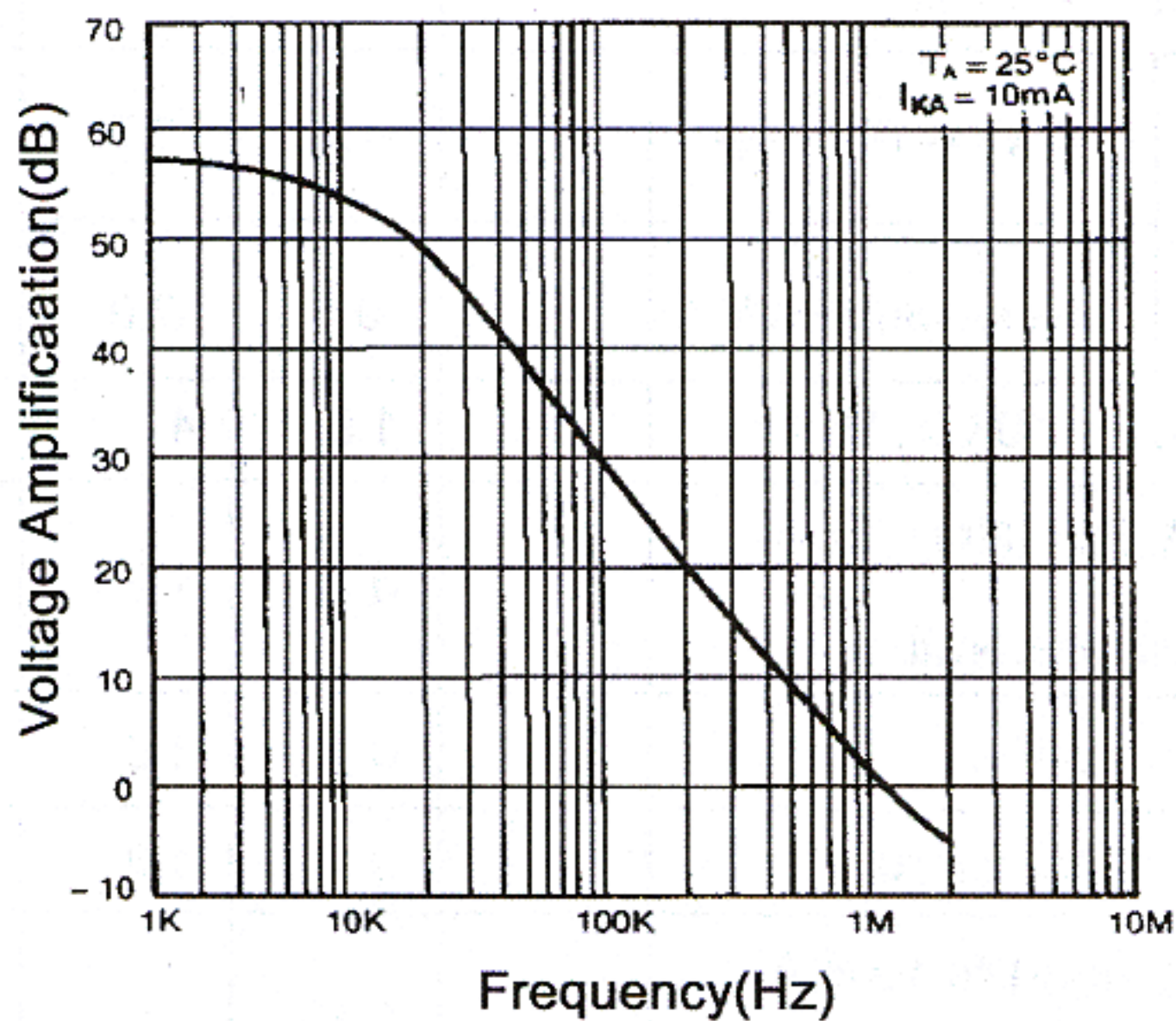
Cathode Current vs. Cathode Voltage



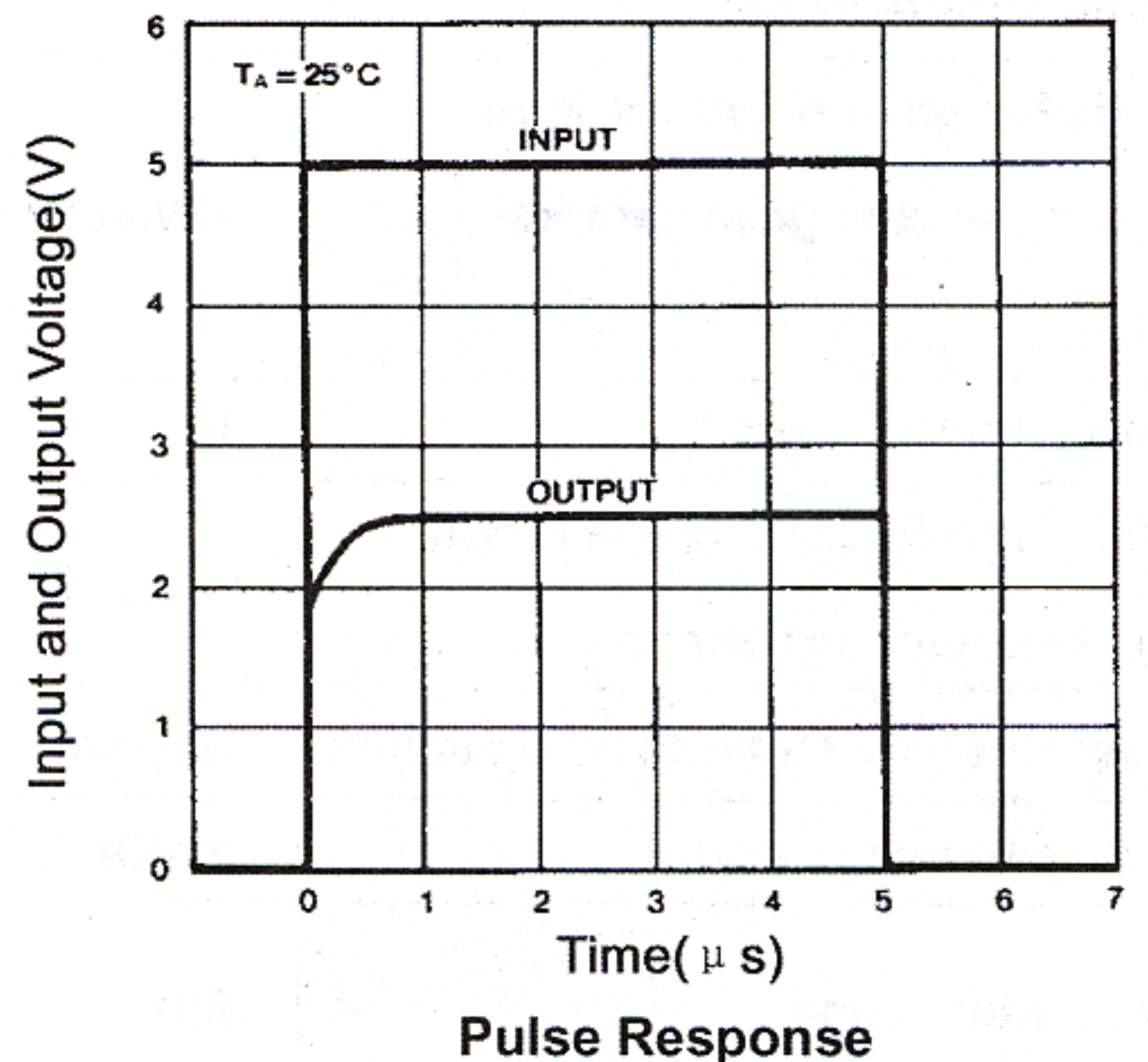
Change in Reference input voltage vs. Cathode Voltage



Dynamic Impedance Frequency



Small Signal Voltage Amplification vs. Frequency



Pulse Response