

# 1S1585~1S1588

Silicon Epitaxial Planar Type  
Diode

ULTRA HIGH SPEED SWITCHING APPLICATIONS.

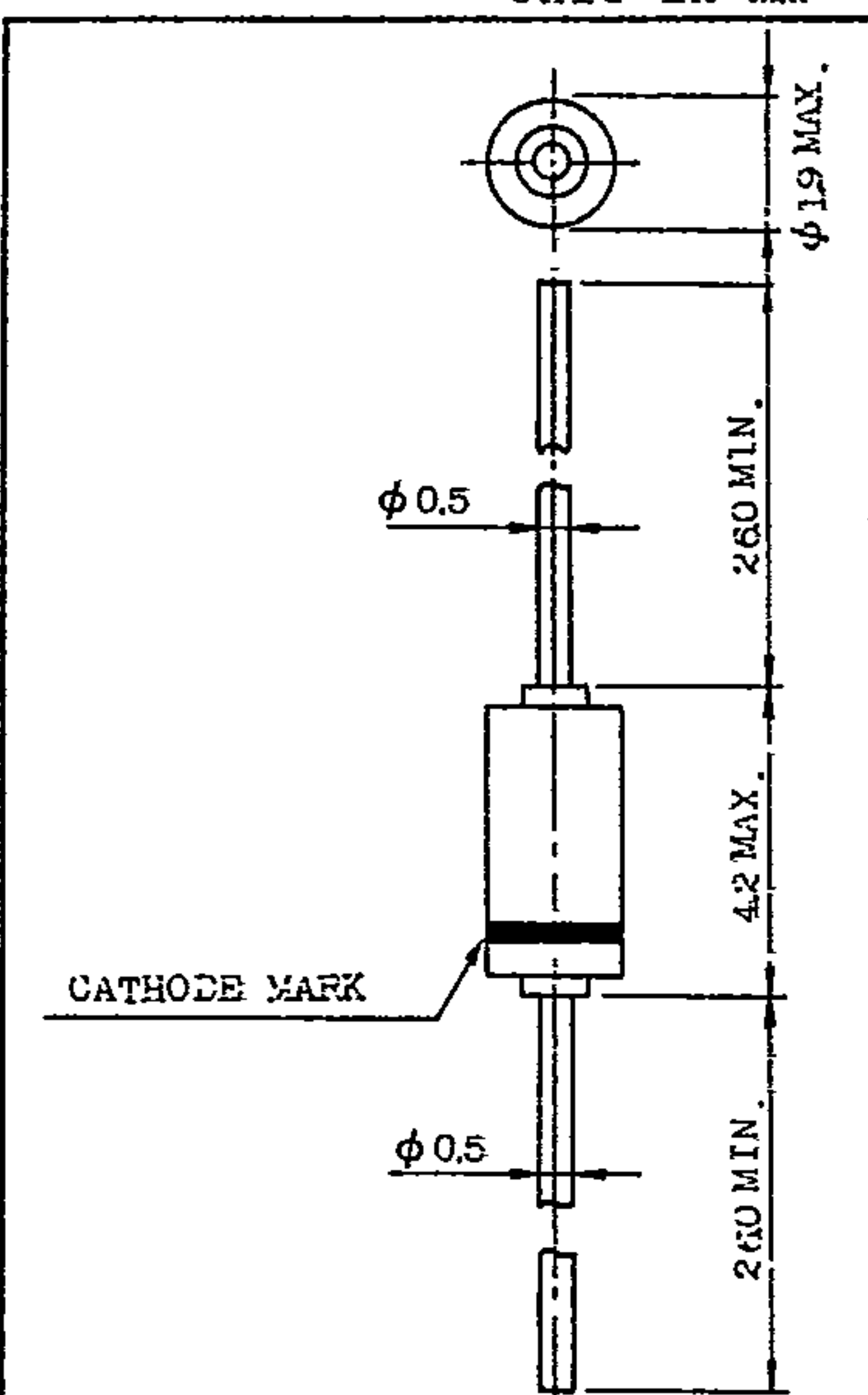
## FEATURES:

- Low Forward Voltage :  $V_F=1.0V$  (Max.)
- Small Total Capacitance :  $C_T=2pF$  (Max.)
- Fast Reverse Recovery Time :  $T_{rr}=2ns$  (Max.)

## MAXIMUM RATINGS ( $T_a=25^\circ C$ )

CHARACTERISTIC		SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	1S1585	$V_{RM}$	90	V
	1S1586 1S1587		55	
	1S1588		35	
Reverse Voltage	1S1585	$V_R$	80	V
	1S1586 1S1587		50	
	1S1588		30	
Maximum (Peak) Forward Current	1S1585 1S1586	$I_{FM}$	480	mA
	1S1587		400	
	1S1588		360	
Average Forward Current	1S1585 1S1586	$I_O$	150	mA
	1S1587		130	
	1S1588		120	

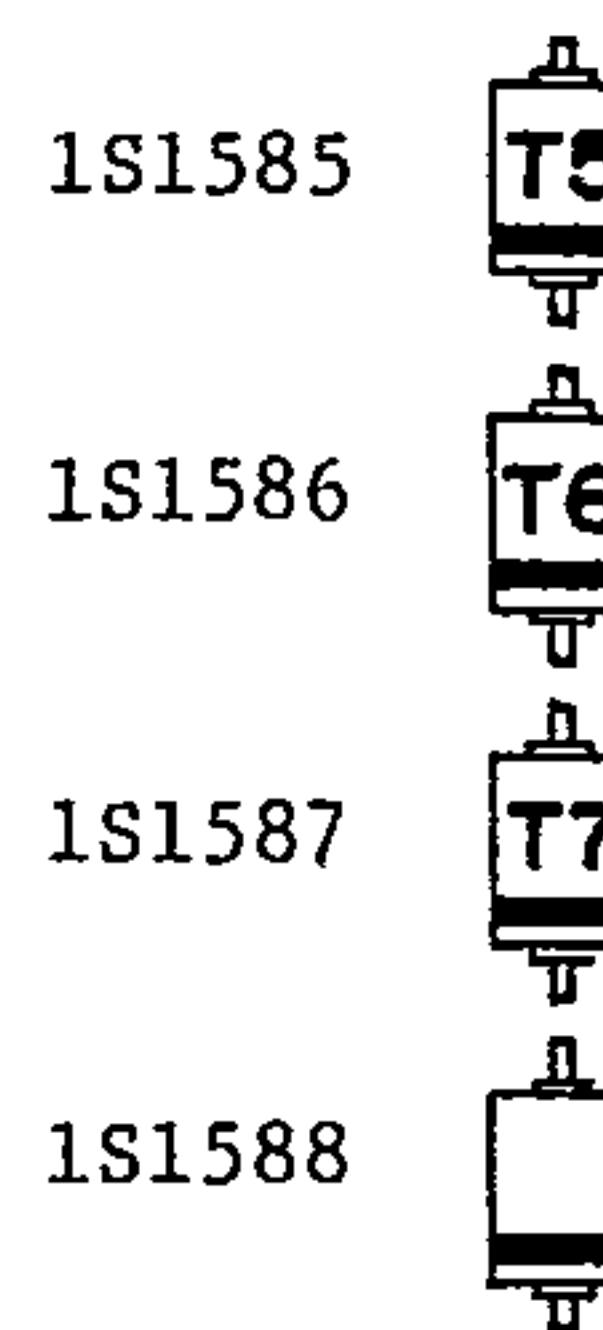
Unit in mm



JEDEC	DO-35
EIAJ	SC-40
TOSHIBA	1-2A1A

Weight : 0.14g

## Marking



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CHARACTERISTIC		SYMBOL	RATING	UNIT
Surge Current (1 sec)	1S1585	I <sub>FSM</sub>	700	mA
	1S1586			
	1S1587		600	
	1S1588		500	
Power Dissipation		P	300	mW
Junction Temperature		T <sub>j</sub>	175	°C
Storage Temperature Range		T <sub>stg</sub>	-65 ~ 175	°C

## ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	1S1585	V <sub>F</sub>	I <sub>F</sub> = 100mA	-	-	1.0	V
	1S1586			-	-	1.2	
	1S1587			-	-	1.3	
	1S1588			-	-	1.3	
Reverse Current	1S1585	I <sub>R</sub>	V <sub>R</sub> = 80V	-	-	0.5	μA
	1S1586		V <sub>R</sub> = 50V				
	1S1587		V <sub>R</sub> = 50V				
	1S1588		V <sub>R</sub> = 30V				
Total Capacitance	1S1585	C <sub>T</sub>	V <sub>R</sub> = 0 f = 1MHz	-	-	2	pF
	1S1586			-	-	2	
	1S1587			-	-	2	
	1S1588			-	-	3	
Reverse Recovery Time	1S1585	t <sub>rr</sub>	V <sub>R</sub> = 6V	-	-	2	ns
	1S1586		I <sub>F</sub> = 10mA				
	1S1587		R <sub>L</sub> = 100Ω				
	1S1588		(Fig.)			4	

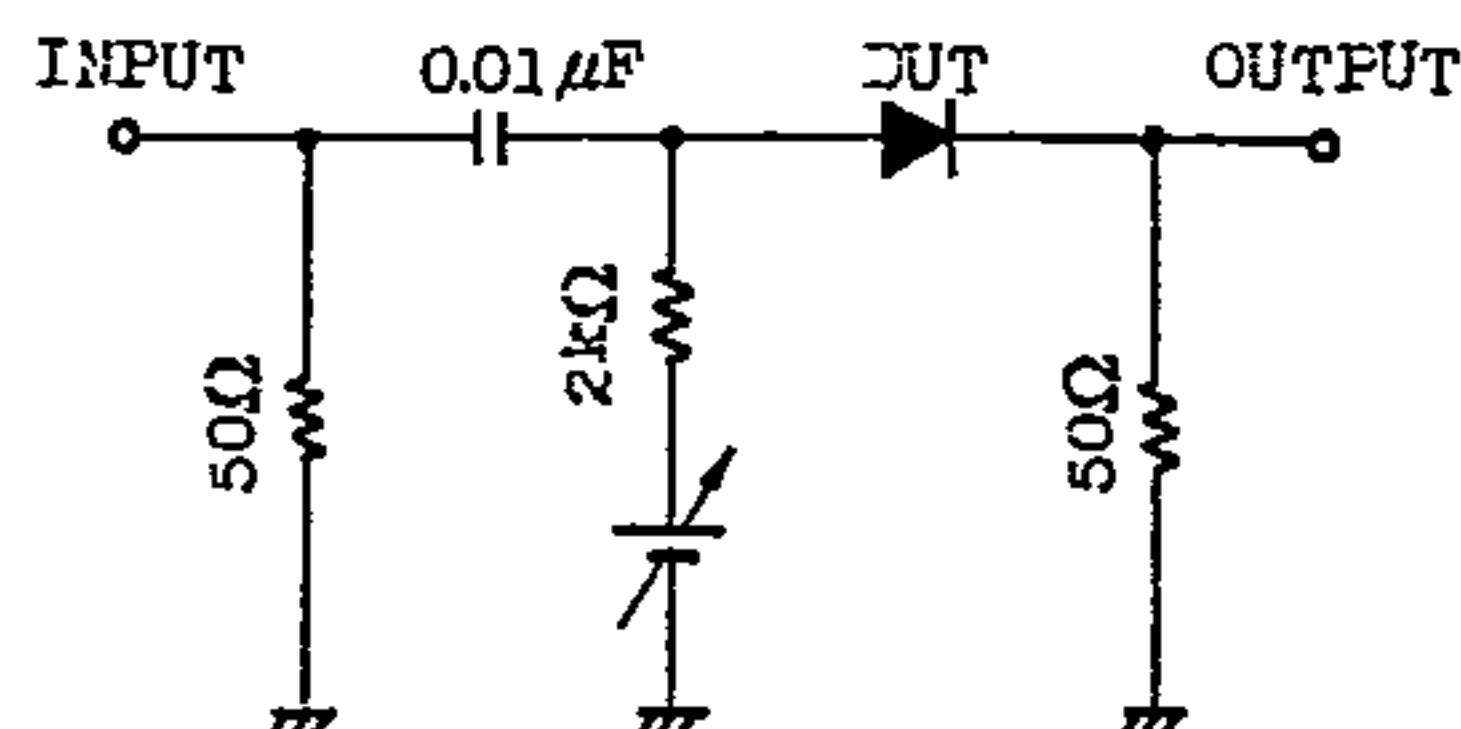
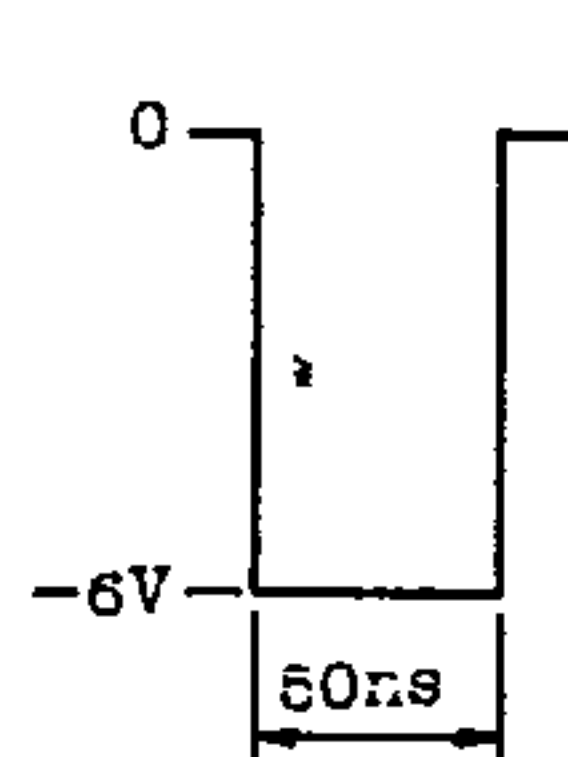
TOSHIBA CORPORATION



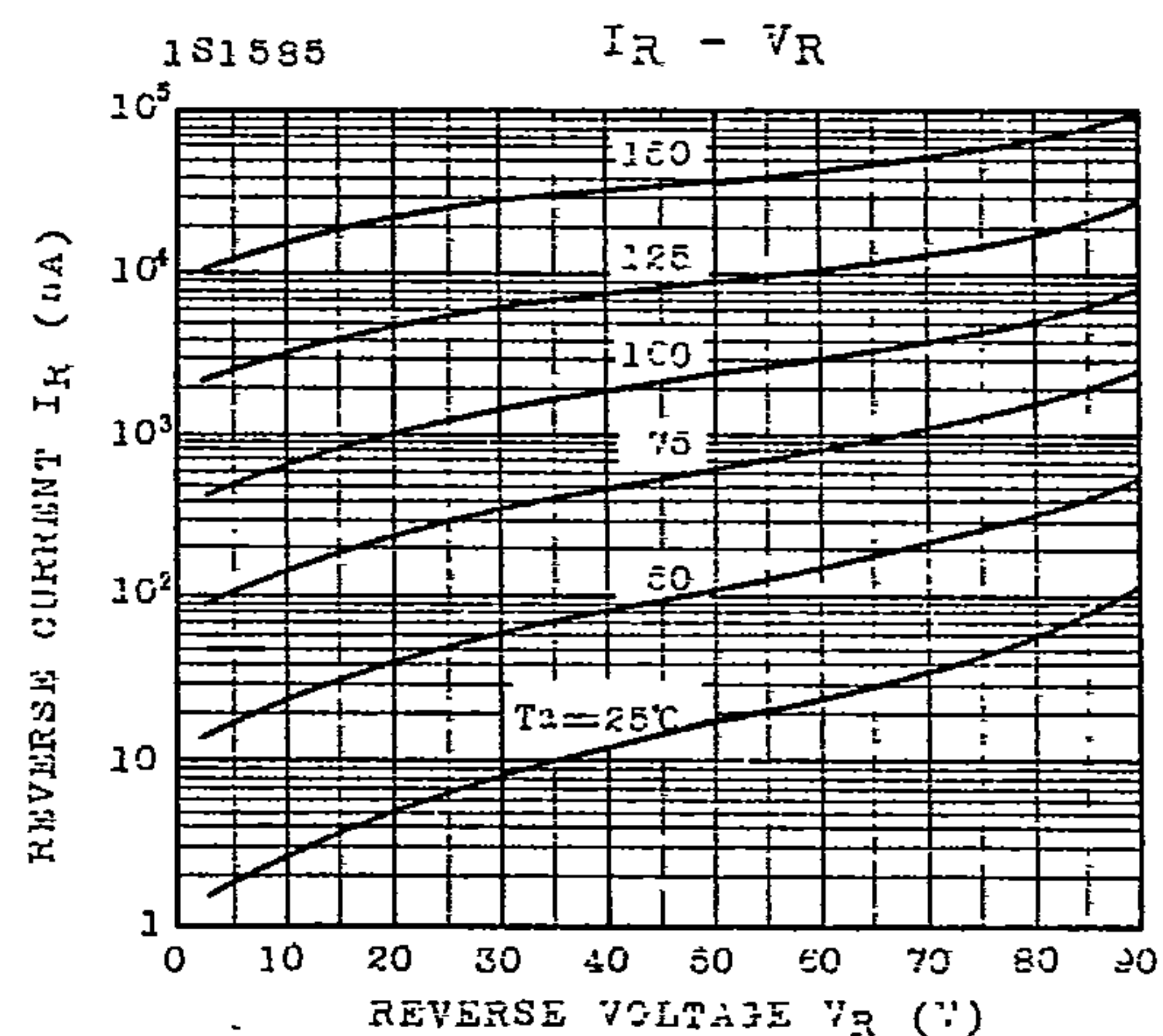
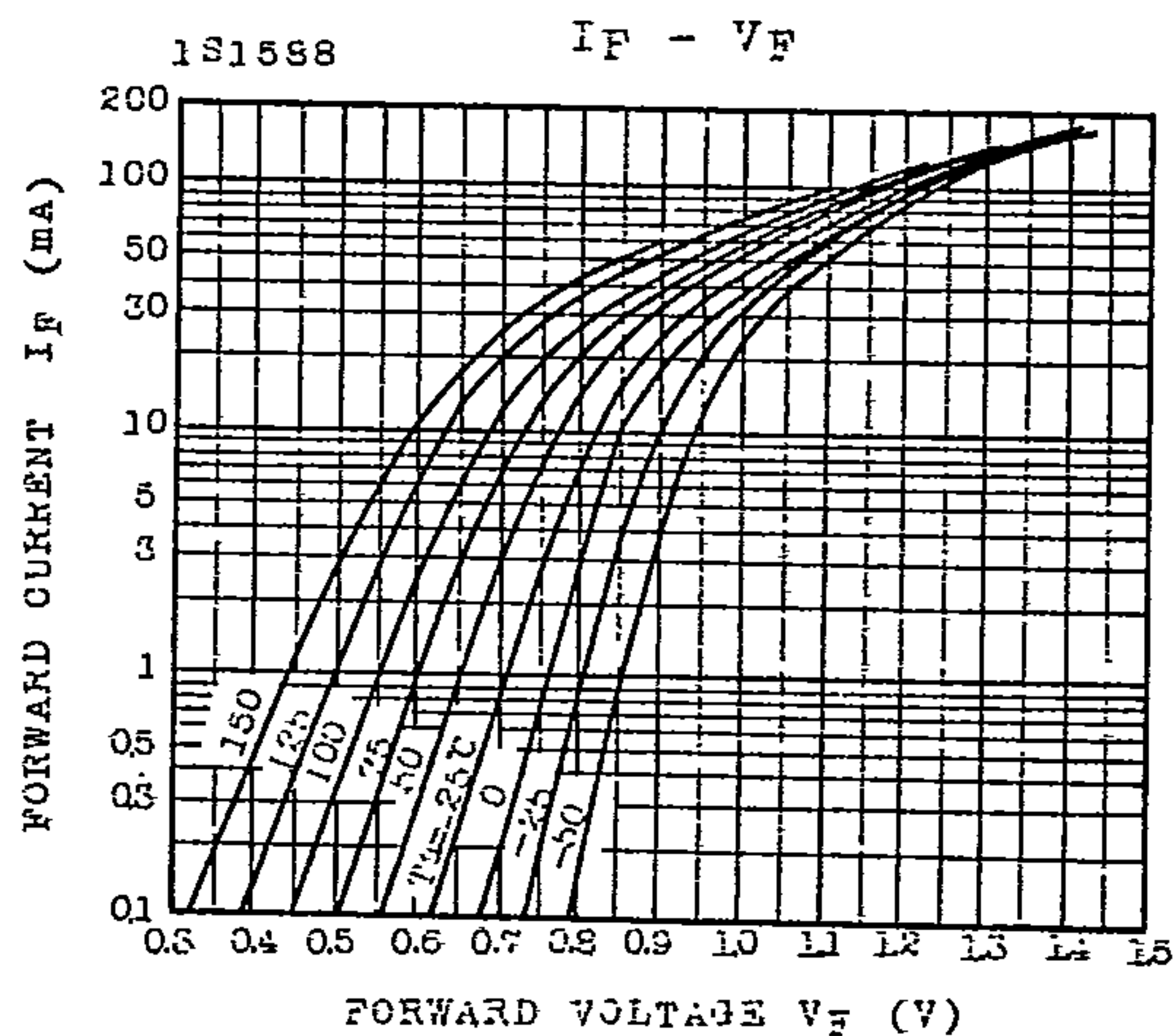
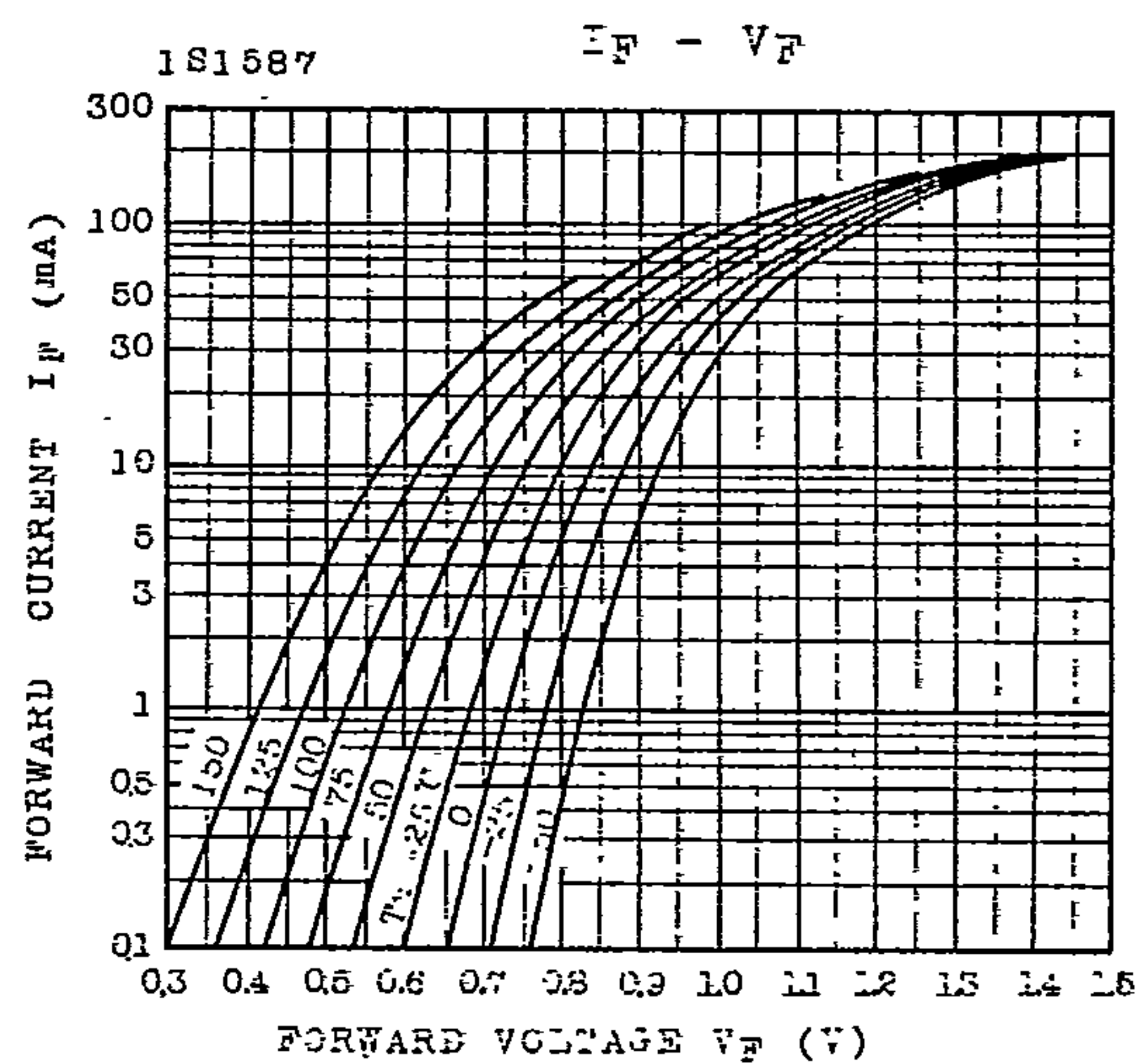
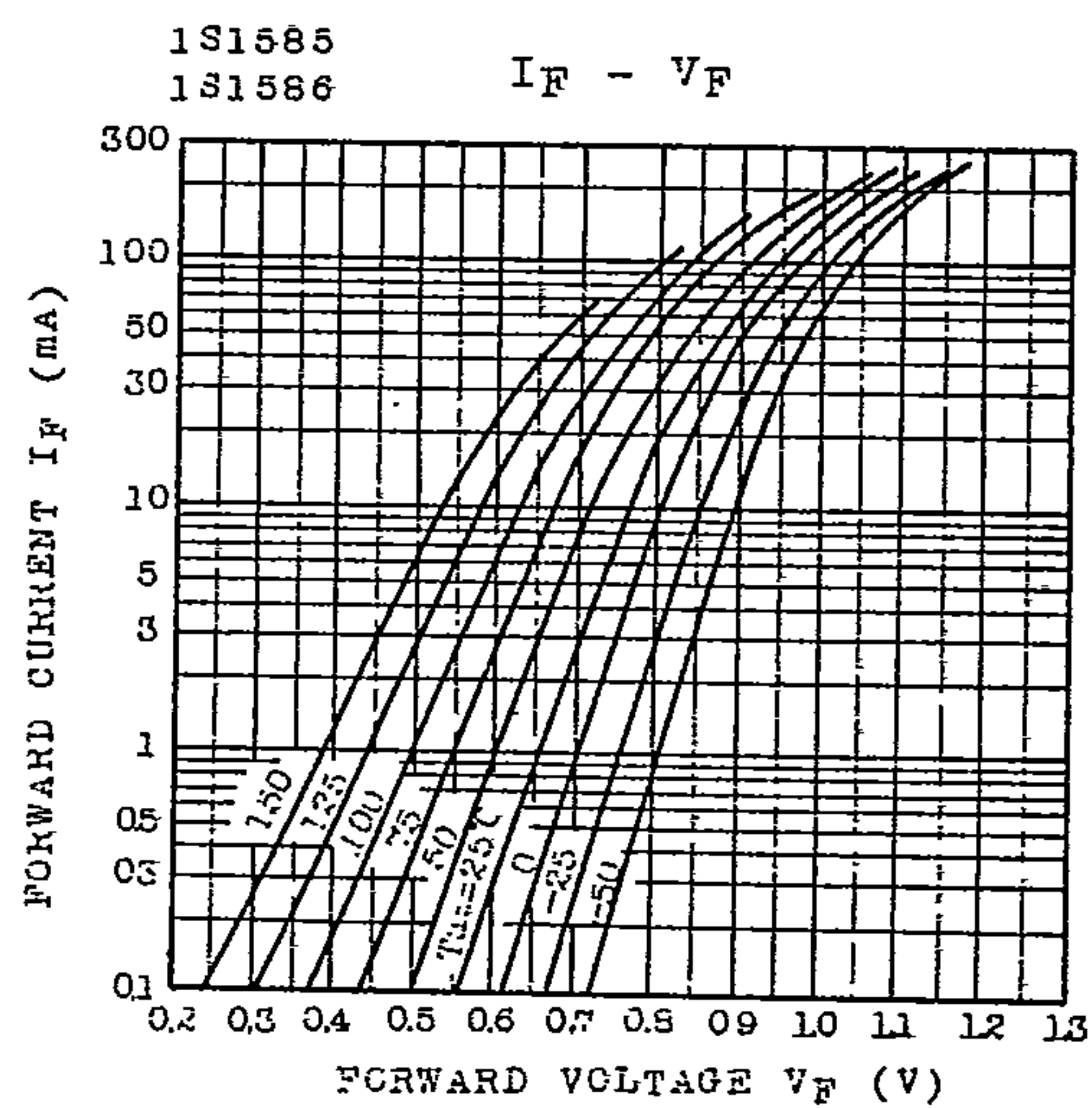
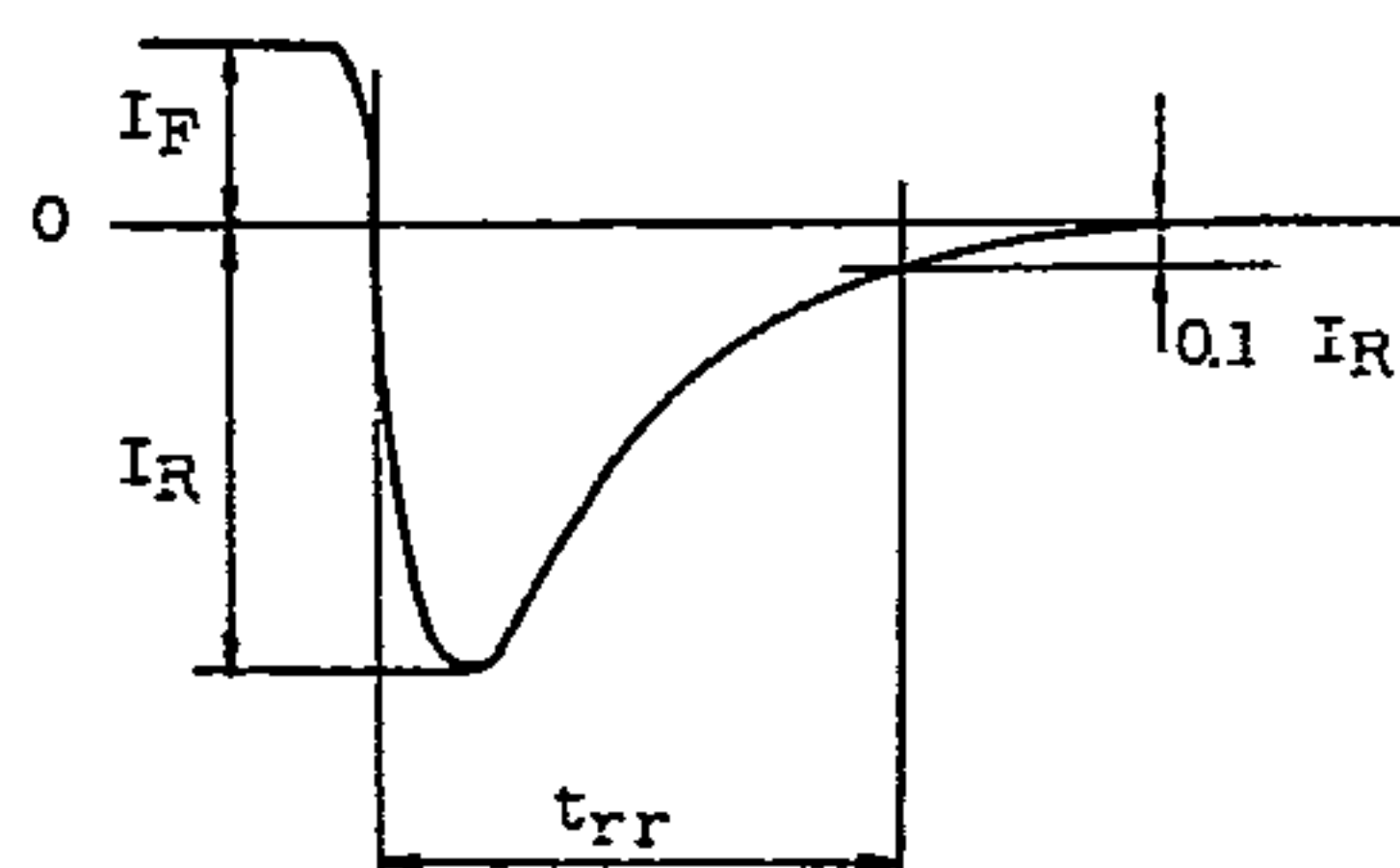
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Fig.  $t_{rr}$  TEST CIRCUIT

INPUT WAVEFORM

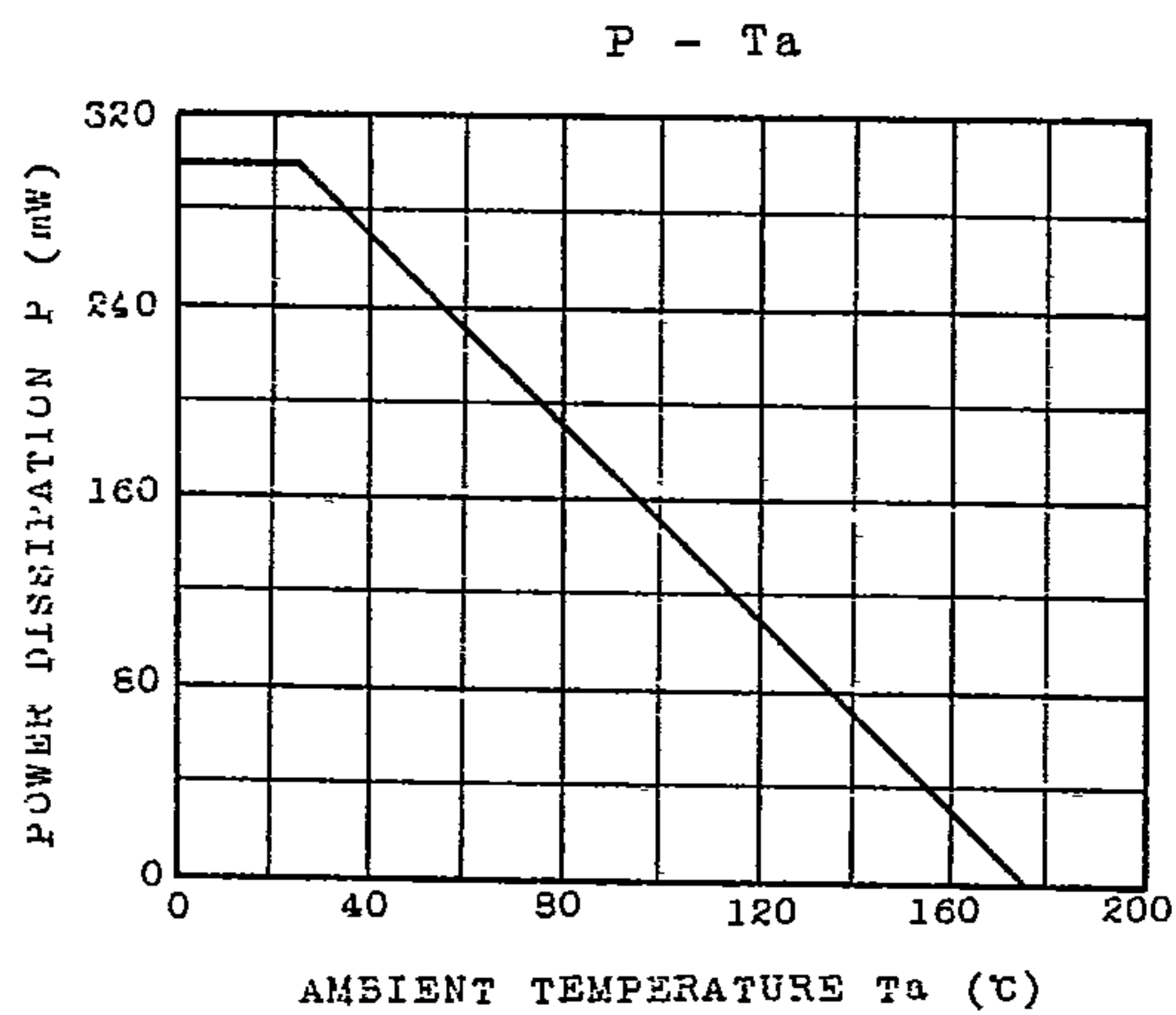
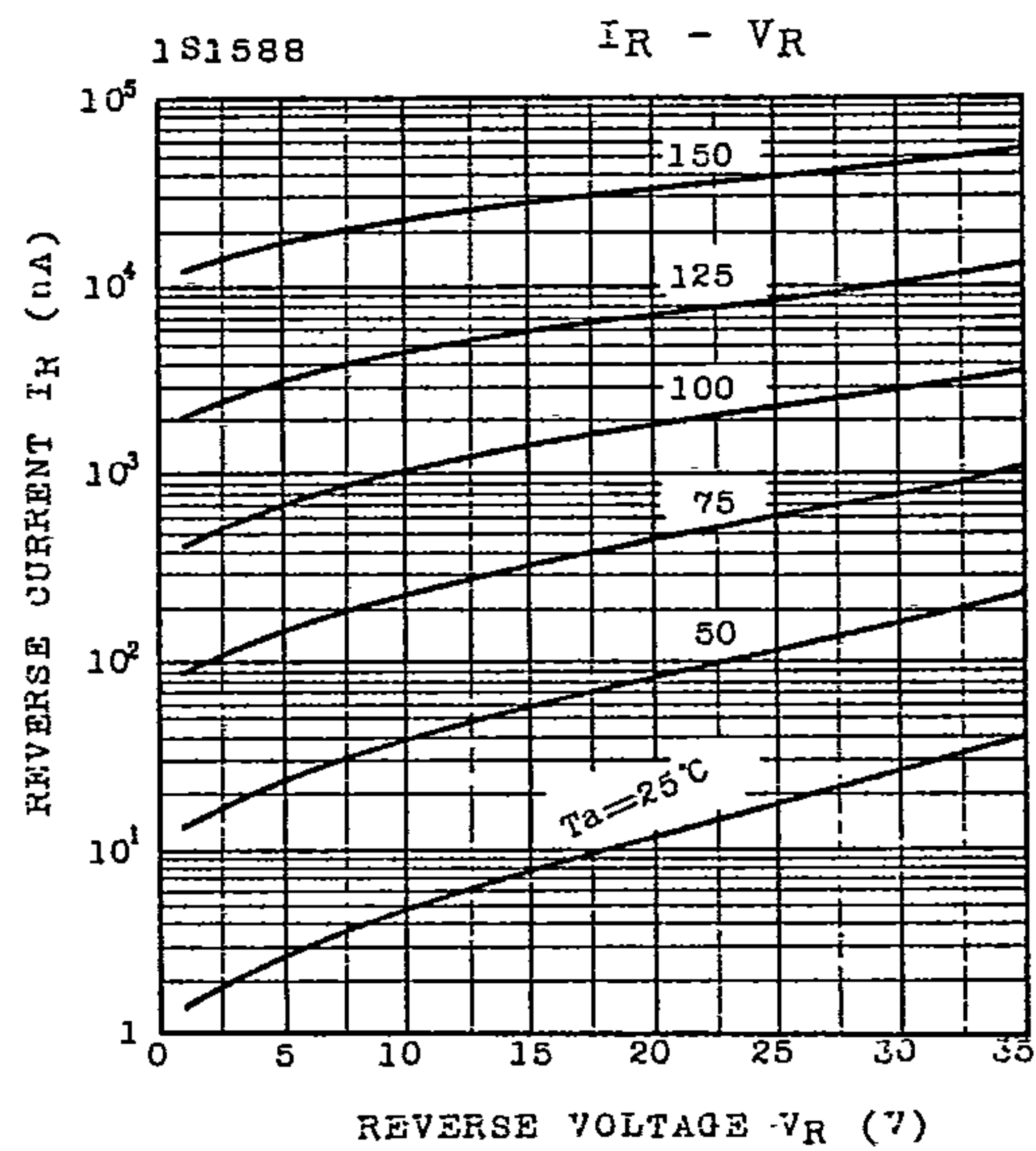
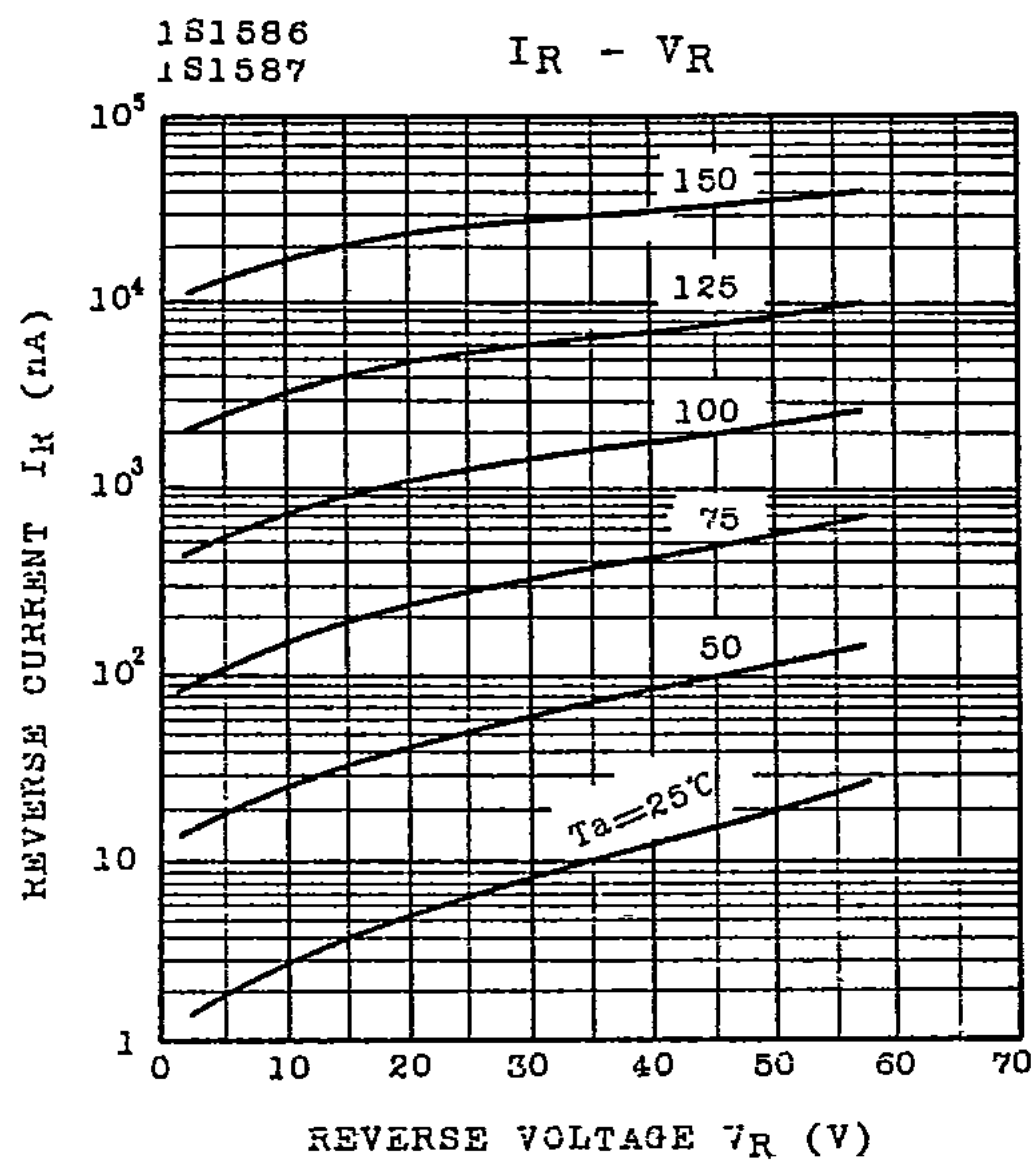


OUTPUT WAVEFORM





# 1S1585~1S1588



TOSHIBA CORPORATION