

# SEMICONDUCTOR TECHNICAL DATA

# KDS196 SILICON EPITAXIAL PLANAR DIODE

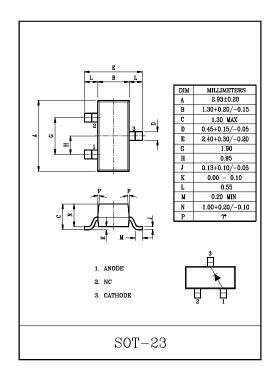
## ULTRA HIGH SPEED SWITCHING APPLICATION.

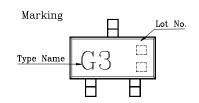
#### **FEATURES**

 $\begin{array}{lll} \bullet & Small\ Package & :\ SOT-23. \\ \bullet & Low\ Forward\ Voltage & :\ V_F=0.9V\ (Typ.). \\ \bullet & Fast\ Reverse\ Recovery\ Time & :\ t_{rr}=1.6ns(Typ.). \\ \bullet & Small\ Total\ Capacitance & :\ C_T=0.9pF\ (Typ.). \end{array}$ 

## MAXIMUM RATINGS (Ta=25℃)

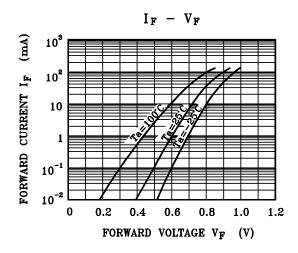
CHARACTERISTIC	SYMBOL	RATING	UNIT	
Maximum (Peak) Reverse Voltage	$ m V_{RM}$	85	V	
Reverse Voltage	$V_{\mathrm{R}}$	80	V	
Maximum (Peak) Forward Current	${ m I}_{ m FM}$	300	mA	
Average Forward Current	$I_{\rm O}$	100	mA	
Surge Current (10ms)	$I_{ m FSM}$	2	A	
Power Dissipation	$P_{D}$	150	mW	
Junction Temperature	$T_{j}$	150	°C	
Storage Temperature Range	$T_{\mathrm{stg}}$	-55~150	C	

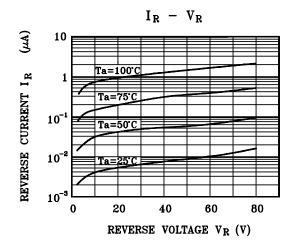


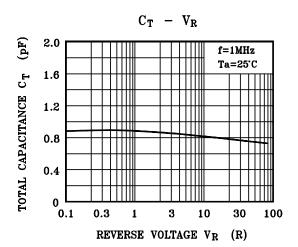


#### ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_{\mathrm{F}(1)}$	I <sub>F</sub> =1mA	=	0.60	_	
	$V_{\mathrm{F}(2)}$	I <sub>F</sub> =10mA	_	0.72	_	V
	$V_{\mathrm{F(3)}}$	I <sub>F</sub> =100mA	_	0.90	1.2	
Reverse Current	$ m I_R$	$V_R$ =80 $V$	_	_	0.5	$\mu A$
Total Capacitance	$C_{\mathrm{T}}$	V <sub>R</sub> =0, f=1MHz	=	0.9	3.0	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =10mA	_	1.6	4.0	nS







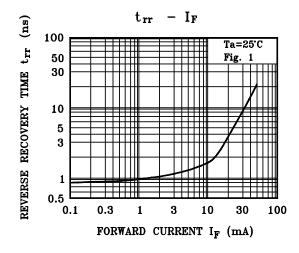


Fig. 1. REVERSE RECOVERY TIME( $t_{rr}$ ) TEST CIRCUIT

