

ULTRA HIGH SPEED SWITCHING APPLICATION.

FEATURES

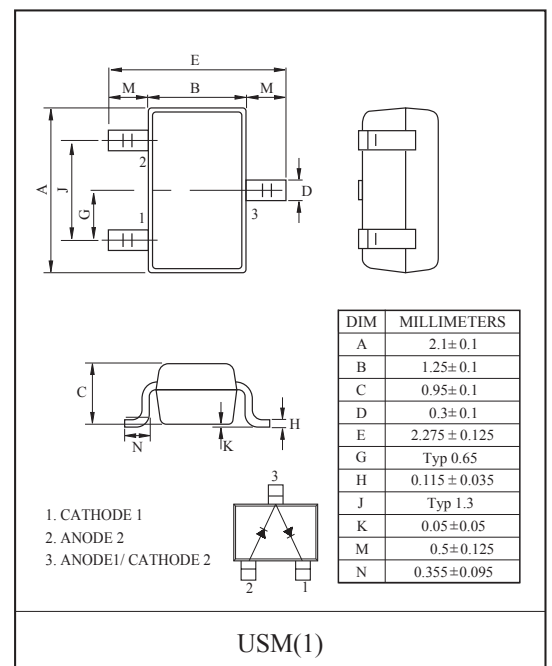
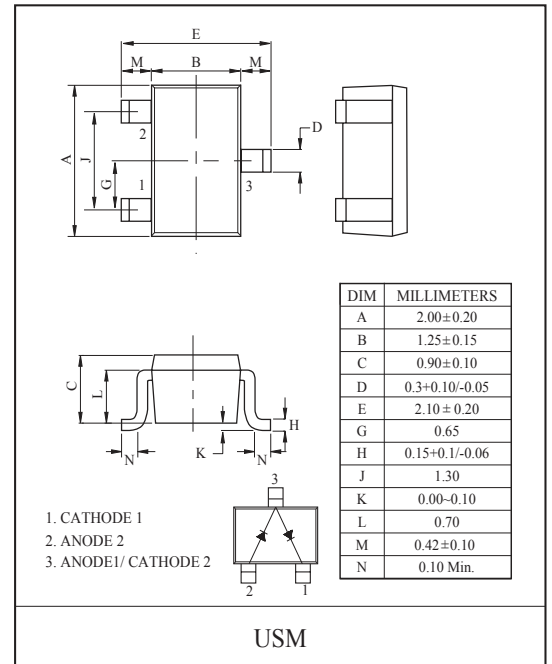
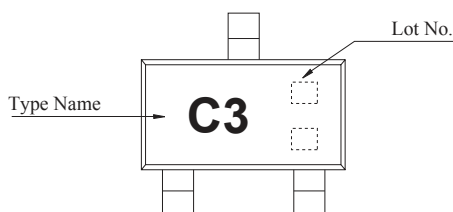
- Small Package : USM.
- Low Forward Voltage : $V_F=0.9V$ (Typ.).
- Fast Reverse Recovery Time : $t_{rr}=1.6ns$ (Typ.).
- Small Total Capacitance : $C_T=0.9pF$ (Typ.).
- Suffix **U** : Qualified to AEC-Q101.
ex) KDS122-RTK/H**U**
- Suffix **A** : USM(1) Package.
ex) KDS122-RTK/P**A**

MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	V_{RM}	85	V
Reverse Voltage	V_R	80	V
Maximum (Peak) Forward Current	I_{FM}	300 *	mA
Average Forward Current	I_O	100 *	mA
Surge Current (10ms)	I_{FSM}	2 *	A
Power Dissipation	P_D	100	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	°C

Note : * Unit Rating. Total Rating=Unit Rating x 0.7

Marking



ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_{F(1)}$	$I_F=1mA$	-	0.60	-	V
	$V_{F(2)}$	$I_F=10mA$	-	0.72	-	
	$V_{F(3)}$	$I_F=100mA$	-	0.90	1.20	
Reverse Current	I_R	$V_R=80V$	-	-	0.5	μA
Total Capacitance	C_T	$V_R=0V, f=1MHz$	-	0.9	3.0	pF
Reverse Recovery Time	t_{rr}	$I_F=10mA$	-	1.6	4.0	nS

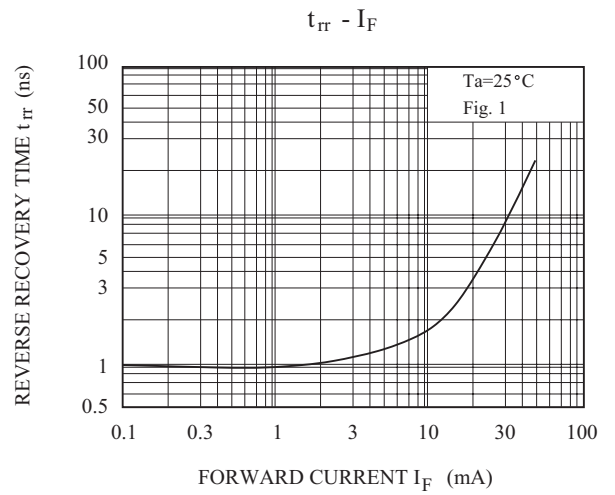
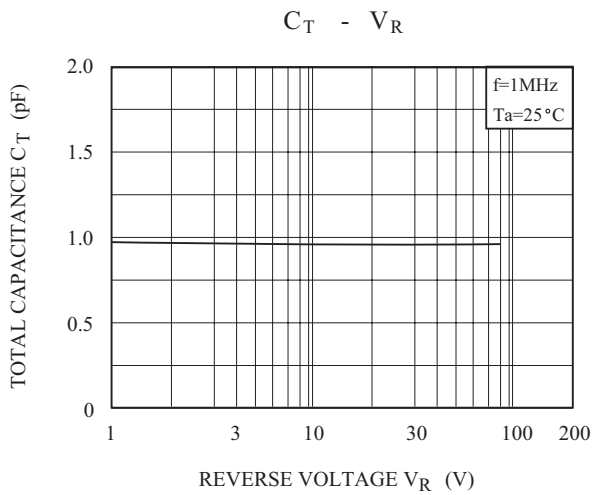
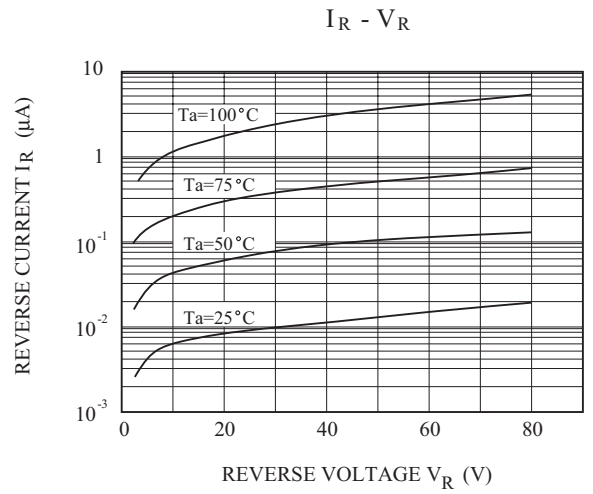
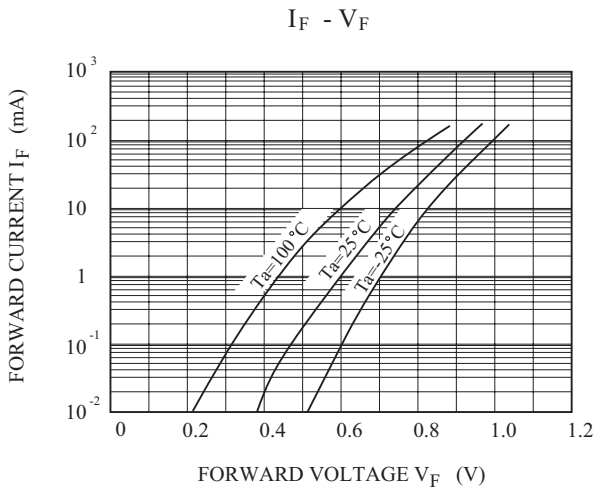
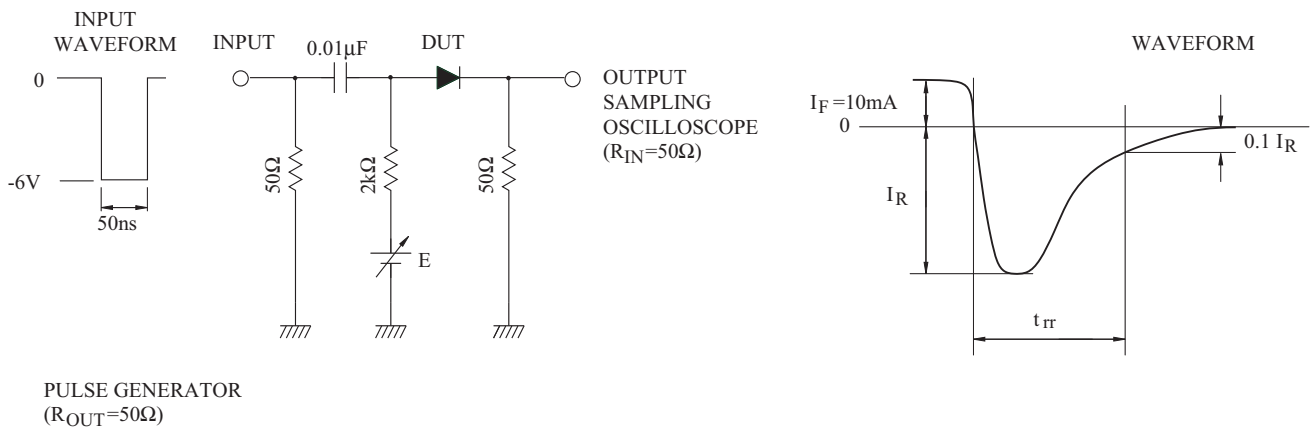


Fig. 1. REVERSE RECOVERY TIME(t_{rr}) TEST CIRCUIT



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2. When you intend to use these products with equipment or device which require an extremely high of reliability and special applications (such as automobile, air travel aerospace, transportation equipment, life support, system and safety devices) in which special quality and reliability and the failure or malfunction of products may directly jeopardize or harm the human body or damage to property and any application other than the standard application intended, please be sure to consult with our sales representative in advance.
3. On designing your application, please use product within the ranges guaranteed by KEC for maximum rating, operating supply voltage range, heat radiation characteristics and other characteristics. User shall be responsible for failure or damage when used beyond the guaranteed ranges.
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6. Although KEC is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors. Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. KEC shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by KEC.

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