



ORIENT

P c e

P d c D a a S e e

Pa N be : OR-X223

C e : _____

Da e: _____

一级代理商：

深圳市弗瑞鑫电子有限公司

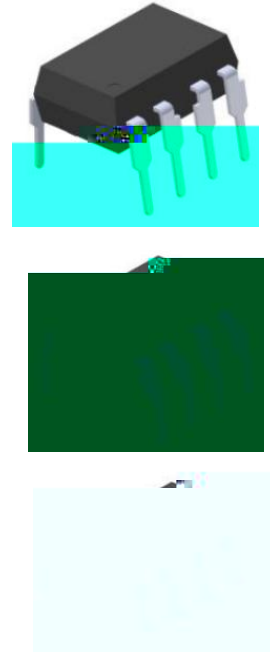
地址：深圳市宝安区西乡大道302号金源商务大厦B座三楼

frxelec

1. Features

- (1) Load capacity IFT 10 A.
- (2) Reverse voltage OFF-standby voltage 800V.
- (3) Load current 0.3A 0.6A 0.9A 1.2A.
- (4) Working temperature range -55 C to 85 C.
- (5) High avalanche voltage (V_{AV} = 5000 V).
- (6) Safety

- UL approved (N.E323844)
- VDE approved (N.40029733)
- CQC approved (N.CQC19001231254)
- (7) In compliance with R HS, REACH standard.
- (8) MSL Category



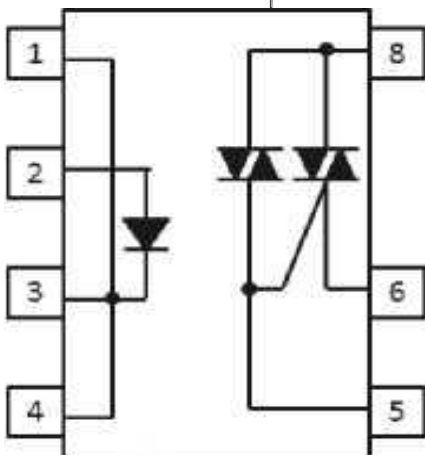
2. Instructions

The OR-X223 is a fast recovery rectifier diode made of GaAs. It is designed for use in AC-DC power supplies. The device is available in two packages: a 115 240 VAC 8 DIP package and a surface mount SMD package.

3. Application Range

- High efficiency
- Low forward voltage
- Suitable for high frequency applications.
- Power capacity

4. Functional Diagram



5. Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Rated Value	Unit	
I	Rated Current	I_F	60	A	
	Peak Forward Current *1	I_{FP}	1	A	
	Reverse Voltage	V_R	6	V	
O	Reverse Bias OFF-Reverse Voltage	V_{DRM}	800	V	
	Average RMS Current	$I_{T(RMS)}$	OR-0223	0.3	A
			OR-1223	0.6	
			OR-2223	0.9	
			OR-3223	1.2	
	*3 Peak Reverse Surge Current	I_{TSM}	OR-0223	3	A
			OR-1223	6	
			OR-2223	9	
			OR-3223	12	
	Junction Temperature	T_J	125		
Lead Voltage*4	V	5000	V		
Working Temperature	T	-55 + 85			
Storage Temperature	T	-55 + 125			
Solder Temperature	T	260			

Note:

*1 $f=100\text{Hz}$, $D \leq 0.1\%$

*2 Surge, 50/60Hz, IFT=0 A.

*3 $f=60\text{Hz}$, $\theta_{cc} \leq 0.1$.

*4 AC $f=1\text{kHz}$, R.H.=40-60% R.H. $I_{T(RMS)}$, I_{TSM} ,
1, 2, 3, 4 are defined in 5, 6, 7, 8 are defined in 5.

*5 $F=10\text{mm}$ lead

6. Recommended Operating Conditions

Parameter		Symbol	Min	Typ.*	Max	Unit	Condition
Input	Forward Voltage	V_F	---	1.2	1.4	V	$I_F=20\text{ A}$
	Reverse Current	I_R	---	---	5	A	$V_R=6V$
Output	*1. Peak Current, ESD	I_{DRM}	---	10	100	A	$V_{DRM}=800V$
	Operating Voltage, ESD	V_{TM}	---	---	2.5	V	$I_F=10\text{ A}$, $I_{TM}=MAX$
	Hold Current, ESD	I_H	---	---	25	A	
	*2. Capacitance Ref Off-Save	d/d	200	---	---	V/	$V_{DRM}=800V*1/2$
Transfer Characteristics	*3. Led Test Current, Current Red	I_{FT}	---	---	10	A	$V_D=6V, R_L=100$
	TO T e	T	---	---	10		$I_F = 20\text{ A}$, $V_D = 6V$, $R_L = 100$
	Initial Resistance	R_{I-O}	5×10^{11}	10^{12}	---		$V_{I-O}=500V\text{ DC}$, $40\text{ } 60\%RH$

7. Order Information

Part Number

OR-X223U-Y-Z

Note

X223 = Part Number, 0223, 1223, 2223, 3223.

U = Lead form (S, M, etc)

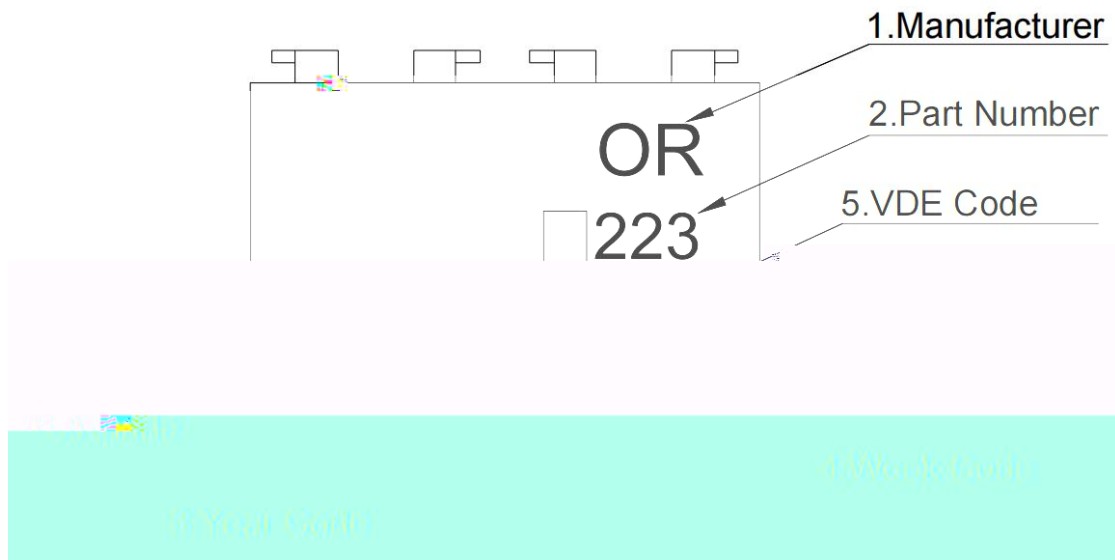
Y = Tape and reel (TA, TA1, etc).

Z = Voltage of VDE type (T, etc).

* VDE Code can be selected.

Option	Description	Packing quantity
N e	Standard DIP O	45 pieces
M	Wide lead type (0.4 pitch)	45 pieces
TA	Surface lead type (Pitch) + TA tape & reel	1000 pieces
TA1	Surface lead type (Pitch) + TA1 tape & reel	1000 pieces

8. Naming Rule

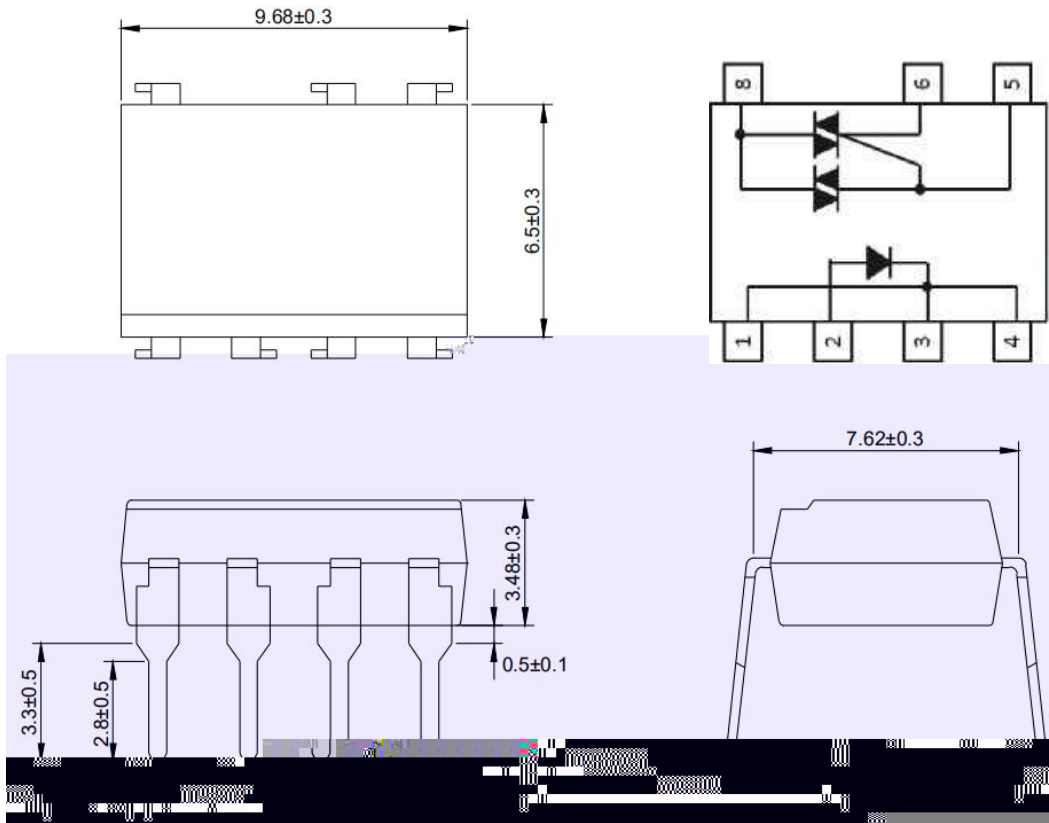


1. Ma fac e : ORIENT.
2. Pa N be : 0223, 1223, 2223 3223 .
3. Yea C de '21' ea '2021' a d .
4. Wee C de 01 ea e f ee , 02 ea e ec d ee a d .
5. VDE C de . (O a)
6. A de.

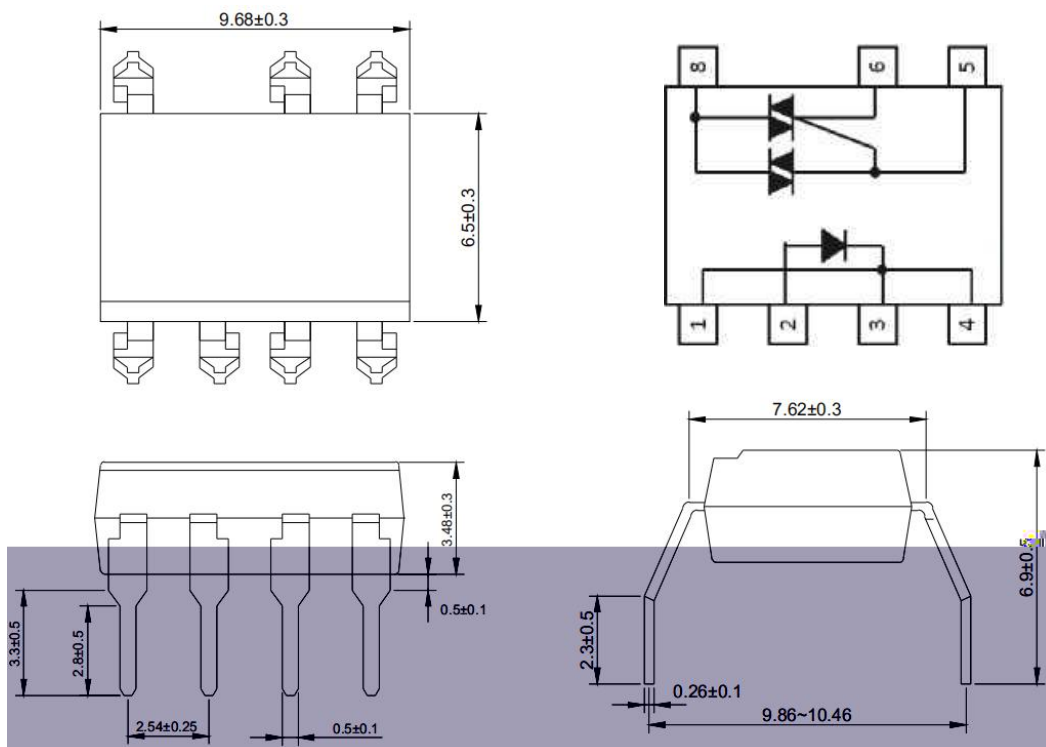
* VDE C de ca be e ec ed.

9. Outer Dimension

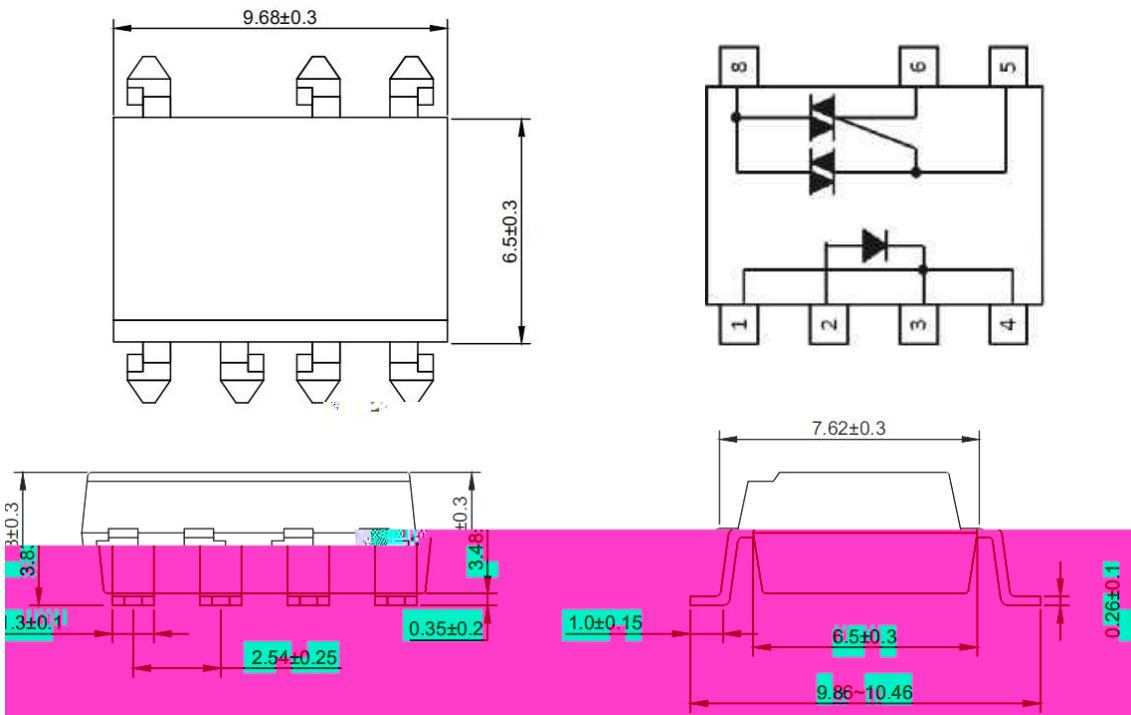
1 OR-X223



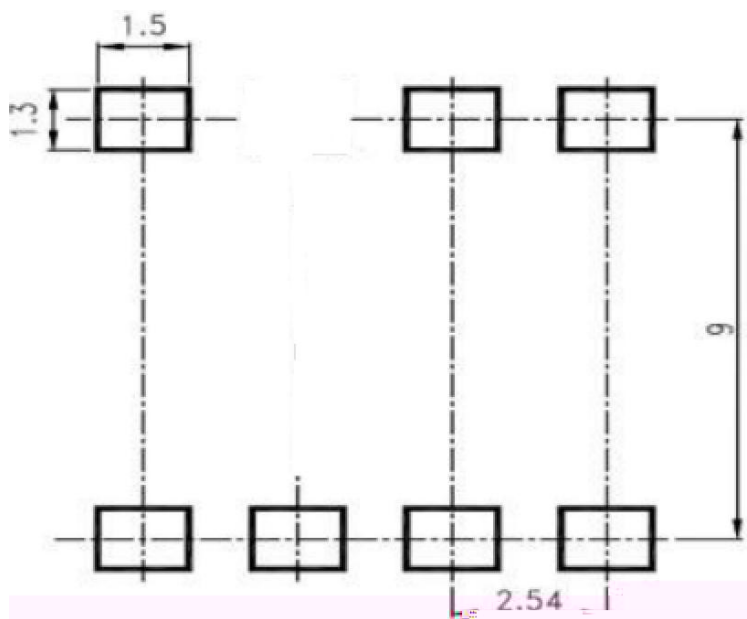
2 OR-X223M



3 OR-X223S

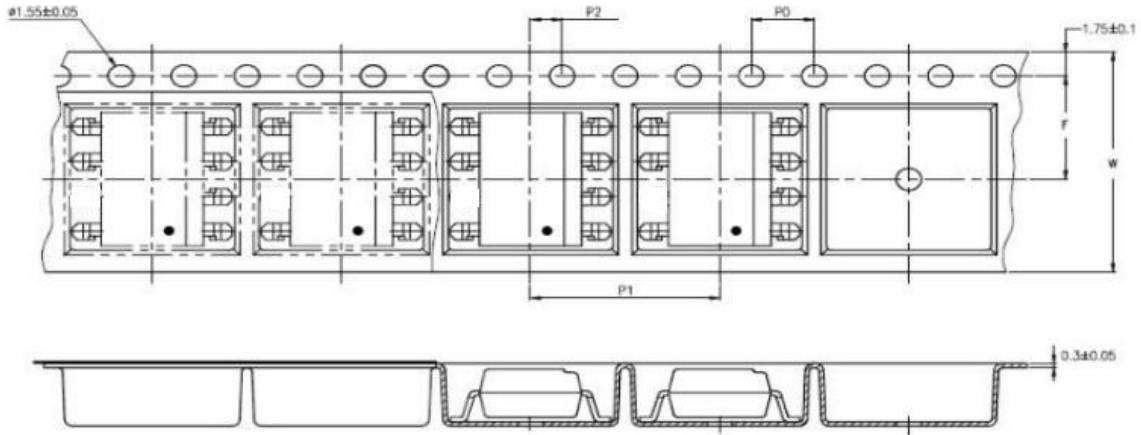


12 Recommended Foot Print Patterns (Mount Pad)

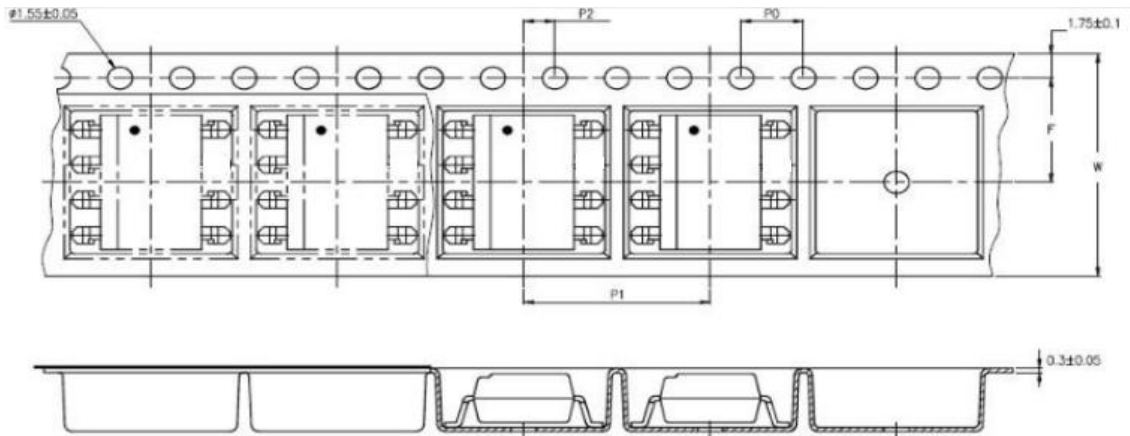


10. Taping Dimensions

1 OR-X223-TA



2 OR-X223-TA1



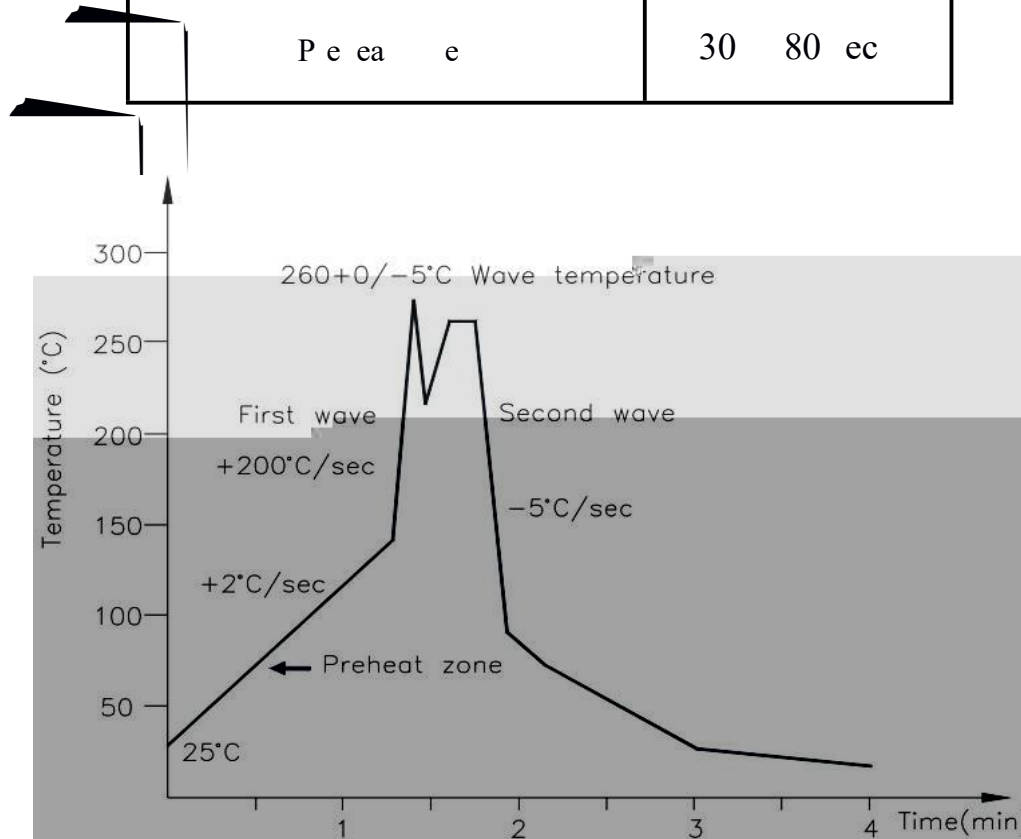
e	b	S e:	c e
ba d d	W	16 0.3	0.63
c	P0	4 0.1	0.15
c	F	7.5 0.1	0.295
	P2	2 0.1	0.079
e a	P1	12 0.1	0.472

E ca a	TA/TA1
e	
a c	1000

2 Wa e de (JEDEC22A111 c a)

O e- e ed ec e ded de e e ea ec d .

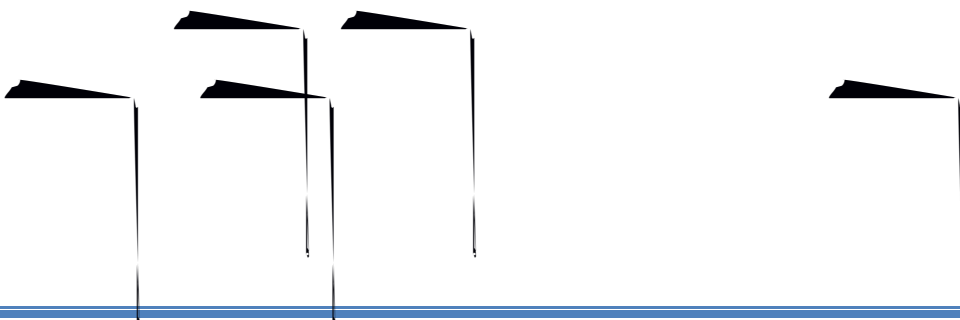
Te e a e	260+0/-5 C
T e	10 ec
P e ea e e a e	5 140 C
P e ea e	30 80 ec



3 Ha d de b de

S e ead ed a ed eac ce a d e- e ed ec e ded.

Temperature	380+ 0/-5°C
Time	3 sec max



13. Characteristics Curve

Fig.1 ON-state Current vs. Ambient temperature

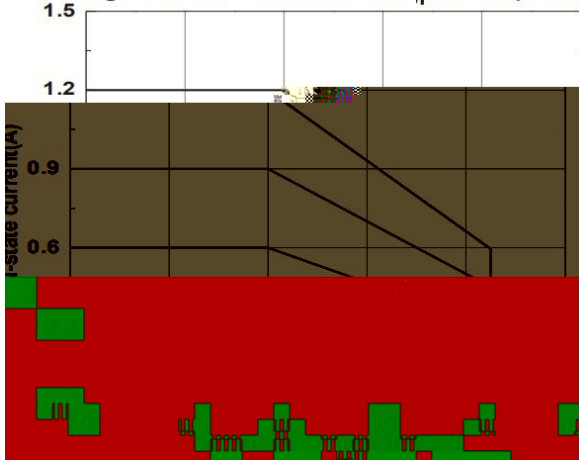


Figure 2. On Voltage vs Ambient Temperature

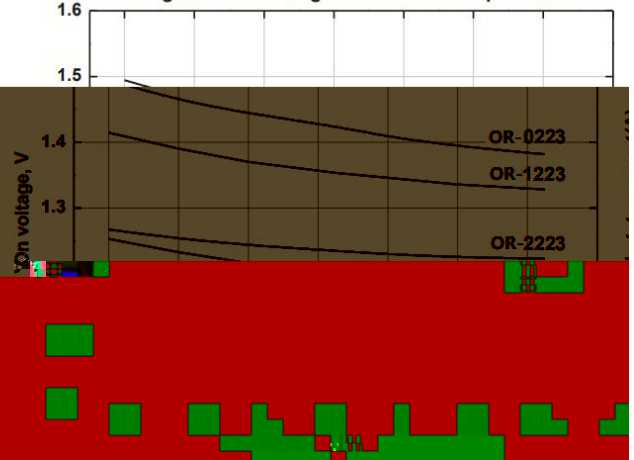


Figure 3. Trigger LED Current vs Ambient Temperature

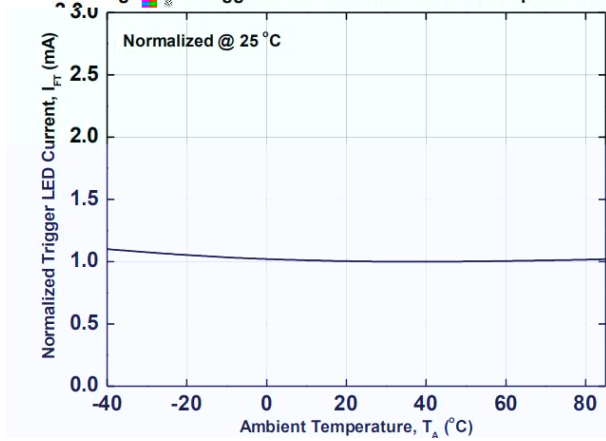


Figure 4. LED Dropout Voltage vs Ambient Temperature

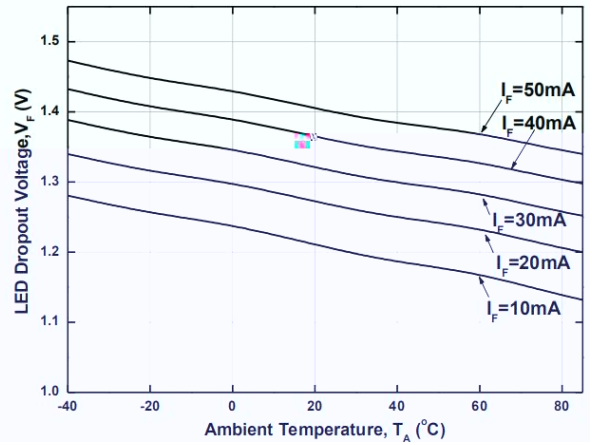


Figure 5. Turn on time vs LED current

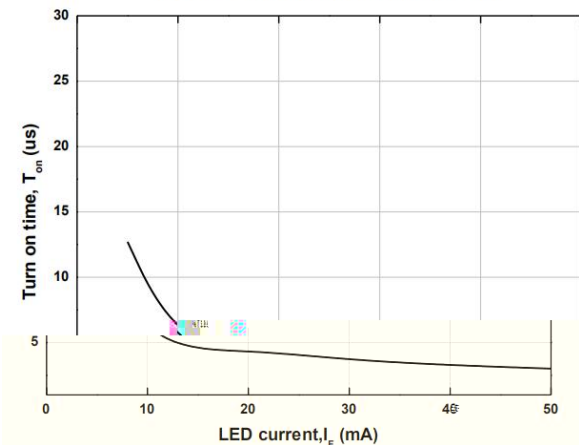


Figure 6. Off state leakage Current vs Load voltage

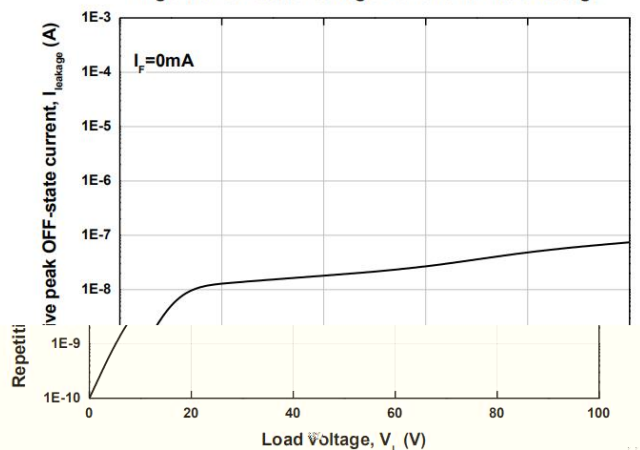


Figure 7. Holding Current vs. Ambient Temperature

