

## Surface Monument High Voltage Bidirectional Trigger Diode

Reverse Voltage 70 ~ 220 V

### FEATURES

- ◆ Low reverse leakage
- ◆ High reliability
- ◆ High temperature soldering guaranteed:  
260°C/10seconds on terminals
- ◆ Lead and body according with RoHS standard
- ◆ Bidirectional crowbar protection
- ◆ High forward surge current capability
- ◆ Will not fatigue The plastic package carries  
Underwriters Laboratory, Flammability Classification  
94V-0
- ◆ Eliminate voltage overshoot caused by fast-rising  
transients

◆ Cannot be damaged by voltage

### Mechanical Data

- ◆ Case: SOD-123FL
- ◆ Lead: Pure tin plated, lead free
- ◆ Mounting Position : Any

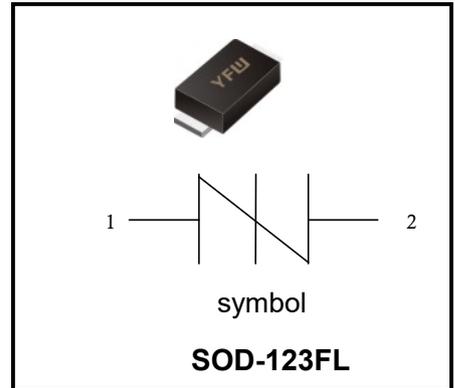
### Thermal Considerations

Parameter	Symbol	Value	Unit
Operating Junction Temperature	$T_J$	125	°C
Storage Temperature Range	$T_{STG}$	-40 to +125	°C
Junction to Ambient on printed circuit	$R_{\theta JA}$	180	°C/W

### Electrical Parameters

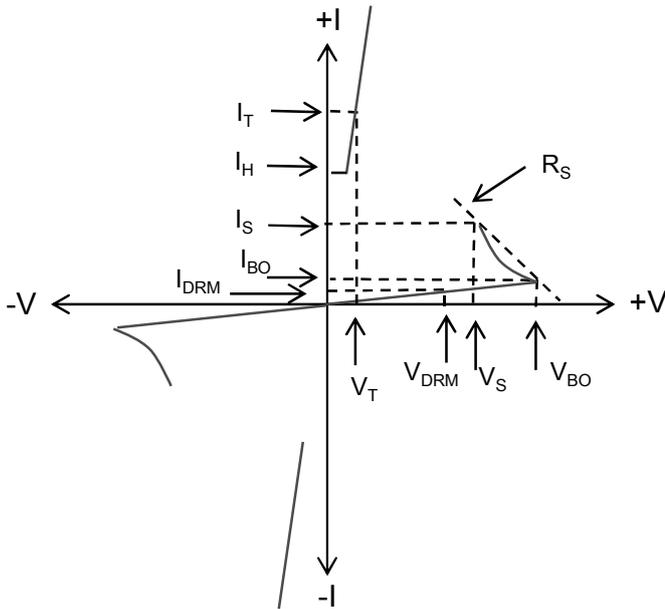
Part Number	Marking	$V_{DRM}$ (V)	$V_{BO}$ (V)			$V_T$ (V)	$I_T$ (A)	$I_{BO}$ (uA)	$I_{DRM}$ (uA)	$I_H$ (mA)
			Min	Typ	Max					
K090SD	K090	70	79	93	97	4.0	1.0	15	1.0	50
K105SD	K105	90	95	105	110	4.0	1.0	15	1.0	50
K110SD	K110	95	104	110	118	4.0	1.0	15	1.0	50
K120SD	K120	100	110	122	125	4.0	1.0	15	1.0	50
K130SD	K130	110	120	135	138	4.0	1.0	15	1.0	50
K140SD	K140	120	130	140	146	4.0	1.0	15	1.0	50
K150SD	K150	125	135	155	160	4.0	1.0	15	1.0	50
K160SD	K160	130	140	163	170	4.0	1.0	15	1.0	50
K180SD	K180	180	165	180	195	4.0	1.0	15	1.0	50
K200SD	K200	180	190	205	215	4.0	1.0	15	1.0	50
K220SD	K220	190	205	220	230	4.0	1.0	15	1.0	50
K240SD	K240	200	220	240	250	4.0	1.0	15	1.0	50
K260SD	K260	220	240	260	280	4.0	1.0	15	1.0	50

Note:1) All measurements are made at an ambient temperature of 25°C.

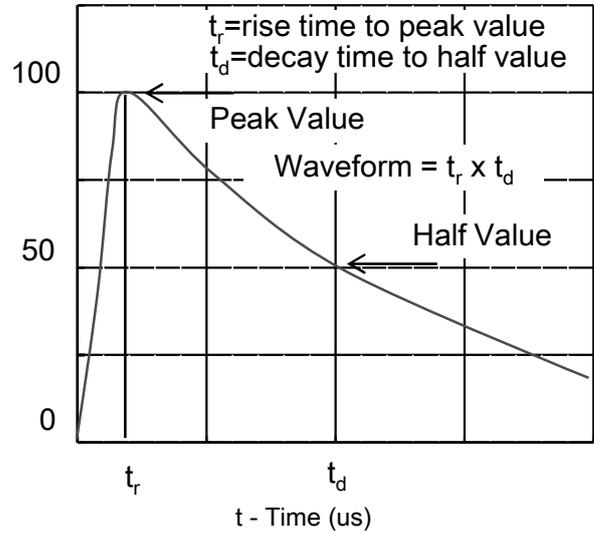


**Characteristics Curves**

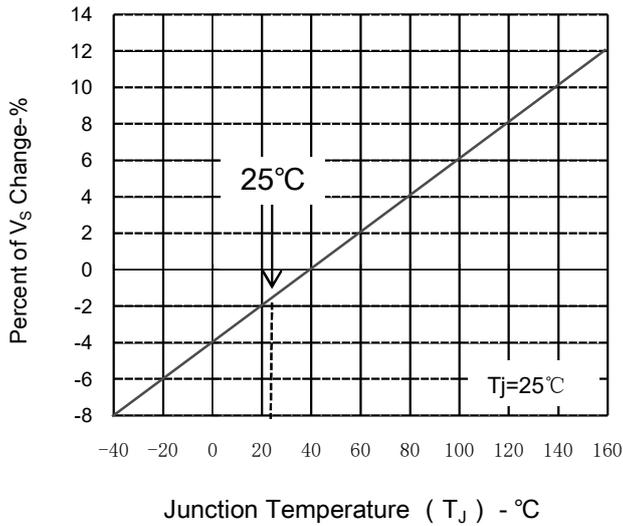
**Figure 1. V-I Characteristics**



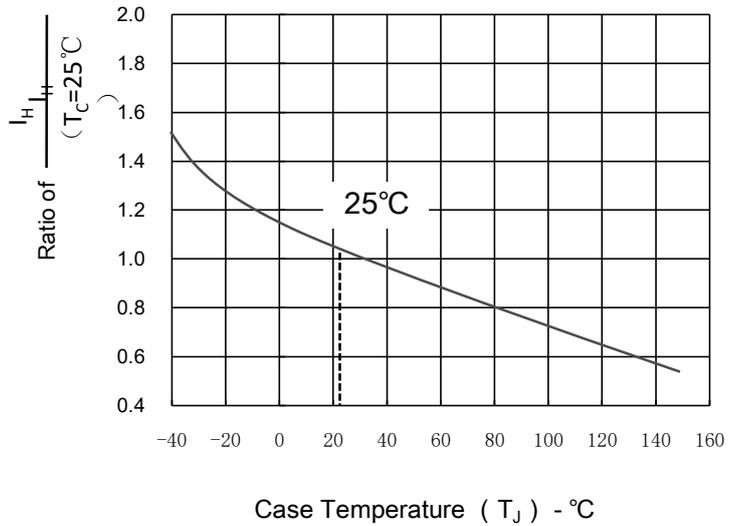
**Figure 2.  $t_r \times t_d$  Pulse Wave-form**



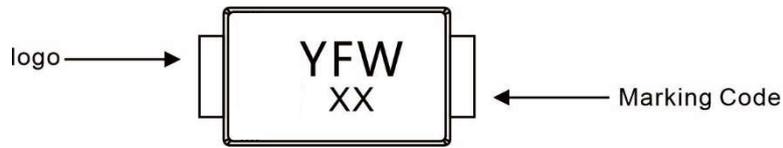
**Figure 3. Normalized  $V_S$  Change versus Junction Temperature**



**Figure 4. Normalized DC Holding Current versus Case Temperature**



**Marking Diagram**



**Ordering information**

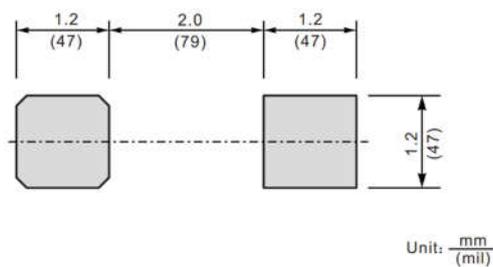
Package	Packing Description	Packing Quantity
SOD-123FL	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

**Package Dimensions**

**SOD-123FL**

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.3	35	43
C	0.12	0.20	4.7	7.9
D	2.6	2.9	102	114
E	1.7	1.9	67	75
e	0.8	1.1	31	43
g	0.7	0.9	28	35
HE	3.5	3.8	138	150
∠	7°			

**The recommended mounting pad size**



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