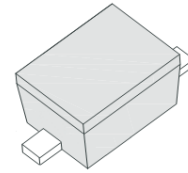


SMD TVS/ESD Arrays (Two Terminals)

Features

- Suitable replacement for MLV's in ESD protection applications
- 100 Watts peak pulses power($t_p=8/20\mu s$)
- Small package for use in portable electronics
- Low clamping voltage and leakage current
- RoHS Compliant & Halogen Free



SOD-723



**HALOGEN
FREE**

Mechanical Data

Case:	SOD-723, Plastic
Terminals:	Solderable per MIL-STD-750, Method 2026
Polarity:	Color band cathode
Weight:	0.0008 grams

Absolute Maximum Ratings

Symbol	Description	Value	Unit	Conditions
PPPM	Peak Pulse Power Dissipation	100	W	$t_p=8/20\mu S$
VESD	ESD Voltage	25	KV	
Tj,Tstg	Operating Junction and Storage Temperature Range	-50 to 150	° C	

SMD TVS/ESD Arrays (Two Terminals)

TVDxxWU

Electrical Characteristics ($T_J=25^{\circ}\text{C}$)

TVD03WU

Marking Code: FS

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
VRWM	Reverse Stand-Off Voltage	-	-	3.3	V	
VBR	Reverse Breakdown Voltage	4	-	-	V	IBR=1.0mA
IR	Reverse Leakage Current	-	-	125	μA	VR=3.3V
VCL	Clamping Voltage (8/20 μS)	-	-	7.5	V	I _{PP} =10A
CJ	Off State Junction Capacitance	-	180	-	pF	VR=0V, f=1MHz
CJ	Off State Junction Capacitance	-	100	-	pF	VR=3V, f=1MHz

TVD05WU

Marking Code: FT

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
VRWM	Reverse Stand-Off Voltage	-	-	5	V	
VBR	Reverse Breakdown Voltage	6	-	-	V	IBR=1.0mA
IR	Reverse Leakage Current	-	-	10	μA	VR=5V
VCL	Clamping Voltage (8/20 μS)	-	-	9.8	V	I _{PP} =8.5A
CJ	Off State Junction Capacitance	-	-	110	pF	VR=0V, f=1MHz
CJ	Off State Junction Capacitance	-	65	-	pF	VR=5V, f=1MHz

TVD08WU

Marking Code: FU

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
VRWM	Reverse Stand-Off Voltage	-	-	8	V	
VBR	Reverse Breakdown Voltage	8.5	-	-	V	IBR=1.0mA
IR	Reverse Leakage Current	-	-	10	μA	VR=8V
VCL	Clamping Voltage (8/20 μS)	-	-	13.4	V	I _{PP} =7.5A
CJ	Off State Junction Capacitance	-	-	70	pF	VR=0V, f=1MHz
CJ	Off State Junction Capacitance	-	40	-	pF	VR=8V, f=1MHz

SMD TVS/ESD Arrays (Two Terminals)

TVDxxWU

TVD12WU

Marking Code: FV

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
VRWM	Reverse Stand-Off Voltage	-	-	12	V	
VBR	Reverse Breakdown Voltage	13.3	-	-	V	IBR=1.0mA
IR	Reverse Leakage Current	-	-	1	μA	VR=12V
VCL	Clamping Voltage (8/20μS)	-	-	20	V	I _{PP} =6.7A
CJ	Off State Junction Capacitance	-	-	46	pF	VR=0V, f=1MHz
CJ	Off State Junction Capacitance	-	30	-	pF	VR=12V, f=1MHz

TVD15WU

Marking Code: FW

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
VRWM	Reverse Stand-Off Voltage	-	-	15	V	
VBR	Reverse Breakdown Voltage	16.7	-	-	V	IBR=1.0mA
IR	Reverse Leakage Current	-	-	1	μA	VR=15V
VCL	Clamping Voltage (8/20μS)	-	-	24	V	I _{PP} =6A
CJ	Off State Junction Capacitance	-	-	35	pF	VR=0V, f=1MHz
CJ	Off State Junction Capacitance	-	20	-	pF	VR=15V, f=1MHz

TVD24WU

Marking Code: FX

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
VRWM	Reverse Stand-Off Voltage	-	-	24	V	
VBR	Reverse Breakdown Voltage	26.7	-	-	V	IBR=1.0mA
IR	Reverse Leakage Current	-	-	1	μA	VR=24V
VCL	Clamping Voltage (8/20μS)	-	-	43	V	I _{PP} =4.5A
CJ	Off State Junction Capacitance	-	-	25	pF	VR=0V, f=1MHz
CJ	Off State Junction Capacitance	-	14	-	pF	VR=24V, f=1MHz

SMD TVS/ESD Arrays (Two Terminals)

TVDxxWU

TVD36WU

Marking Code: FY

Symbol	Description	Min.	Typ.	Max.	Unit	Conditions
VRWM	Reverse Stand-Off Voltage	-	-	36	V	
VBR	Reverse Breakdown Voltage	40	-	-	V	IBR=1.0mA
IR	Reverse Leakage Current	-	-	1	μA	VR=36V
VCL	Clamping Voltage (8/20μS)	-	-	52	V	I _{PP} =3A
CJ	Off State Junction Capacitance	-	-	18	pF	VR=0V, f=1MHz
CJ	Off State Junction Capacitance	-	12	-	pF	VR=36V, f=1MHz

Typical Characteristics Curves

Fig.1- Power Derating Curve

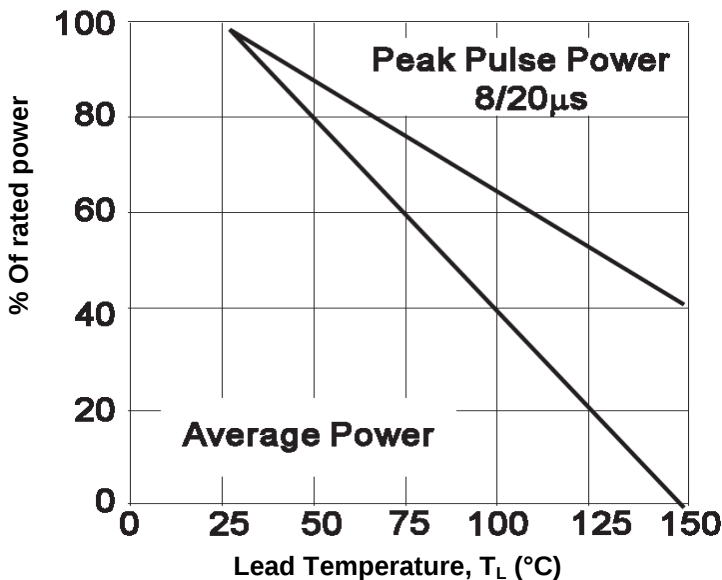


Fig.2- Surge Pulse Waveform Definition

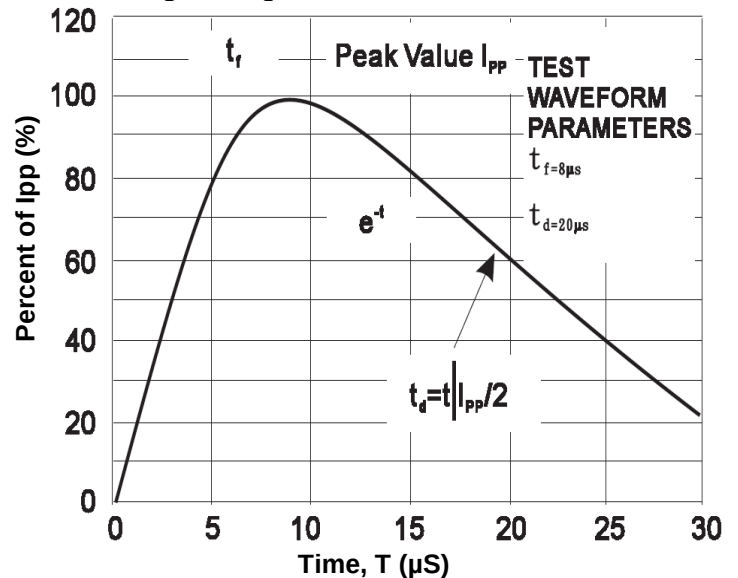


Fig.3- Typical Reverse voltage vs. Capacitance

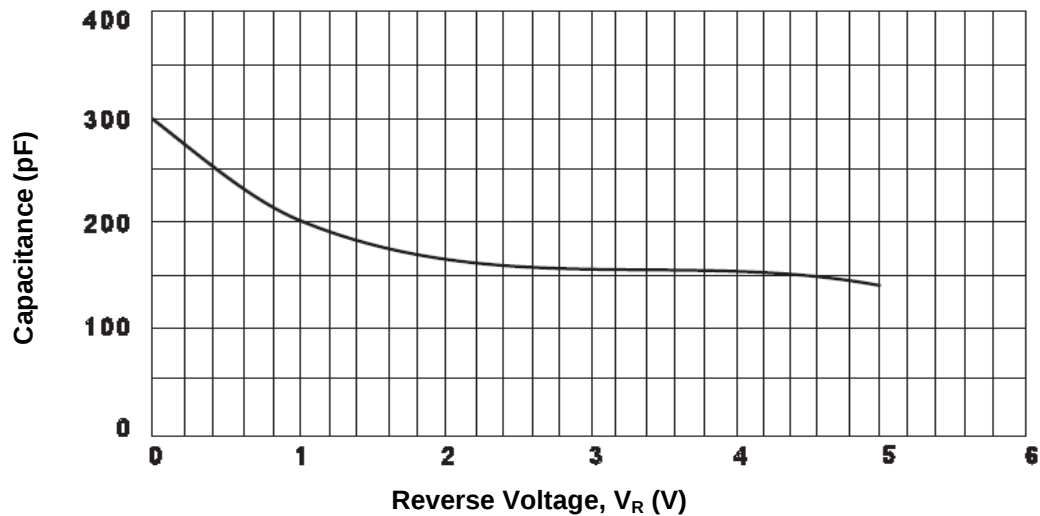
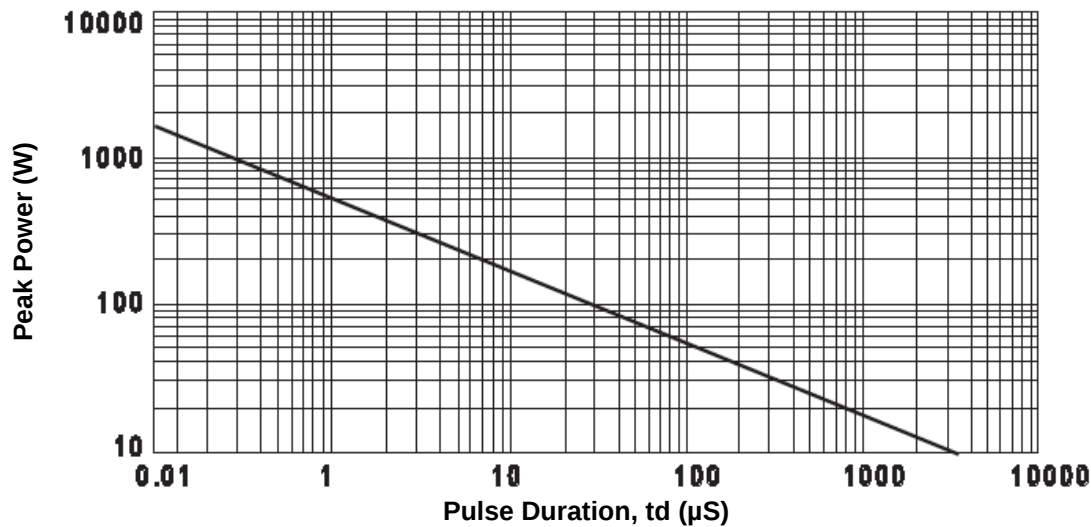
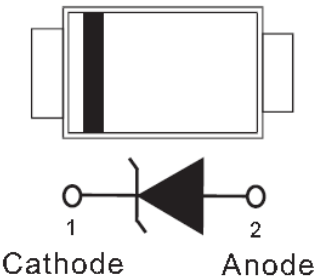


Fig.4- Peak Pulse Power vs. Pulse Time

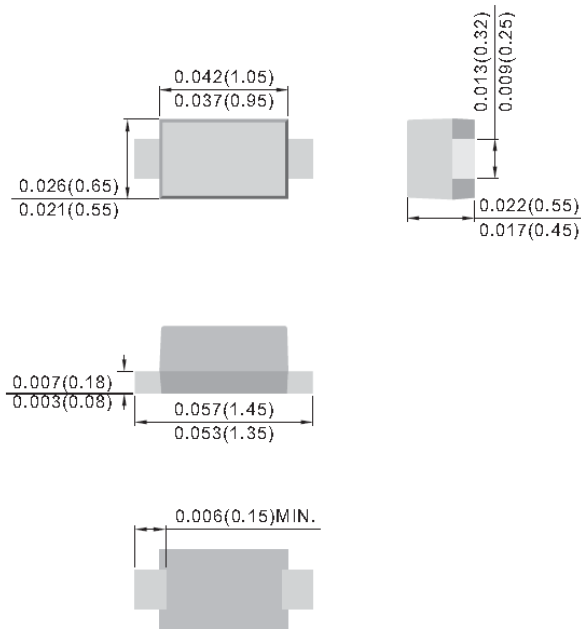


Marking Information



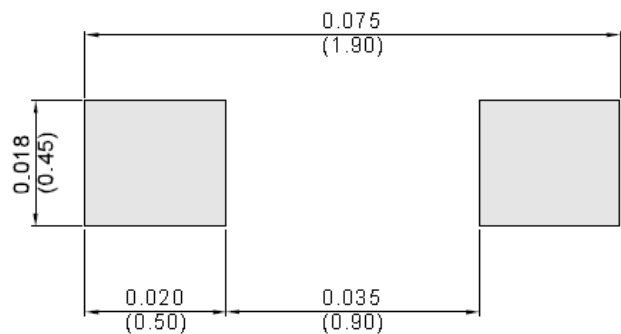
PN	Marking	PN	Marking	PN	Marking
TVD03WU	FS	TVD05WU	FT	TVD08WU	FU
TVD12WU	FV	TVD15WU	FW	TVD24WU	FX
TVD36WU	FY				

Dimensions in inch (mm)



SOD-723

Mounting Pad Layout inch (mm)



Packing Information

Tape and Reel: 8K per 7" plastic reel

Ordering Information

<u>T</u>	<u>V</u>	<u>D</u>	<u>03</u>	<u>WU</u>	<u>-XX</u>	<u>-RG70</u>	
							→ Packing Code:
							→ TR70=7" Tape and Reel, RoHS
							→ RG70=7" Tape and Reel, RoHS, Halogen Free
							→ Factory Location Code
							→ Package Code: SOD-723
							→ Reverse Stand-Off Voltage: 3.3V
							→ Two terminal package
							→ TVS
							→ Taitron

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