PJEC2415VM1WS

ESD Protection

V_{RWM}	24V/15V

Features

- Bidirectional ESD protection of one line
- IEC61000-4-2(ESD): ±15kV Air, ±8kV Contact Compliance with the capability up to ±30kV
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 3A(8/20µS)
- Low leakage current, maximum of 0.05µA at rated voltage
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std. (Halogen Free)

Mechanical Data

- Case: SOD-323, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00014 ounces, 0.0041 grams
- Marking: VM

Applications

- LIN-bus protection
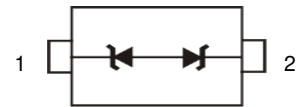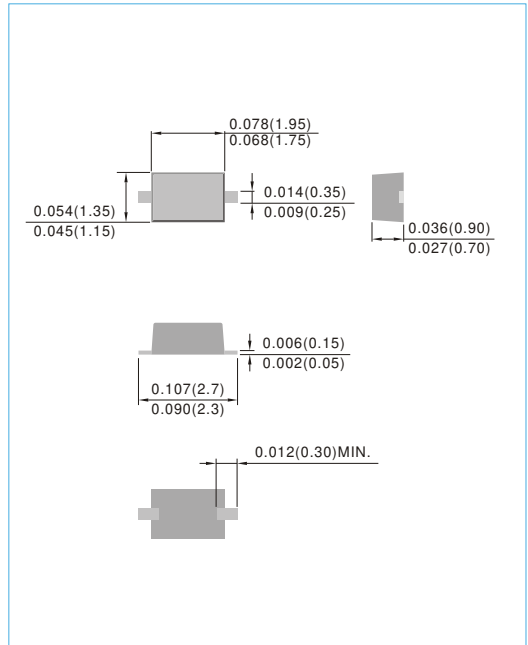- Automotive application

SOD-323 Unit : inch(mm)

0.078(1.95) / 0.068(1.75)
0.054(1.35) / 0.045(1.15)
0.014(0.35) / 0.009(0.25)
0.036(0.90) / 0.027(0.70)
0.107(2.7) / 0.090(2.3)
0.006(0.15) / 0.002(0.05)
0.012(0.30)MIN.

Fig.130(TOP VIEW)

Cathode 1 (15V)
Cathode 2 (24V)

Maximum Ratings (T$_A$=25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation(tp=8/20µs)	P_{PP}	160	W
ESD IEC61000-4-2(Air)	V_{ESD}	±30	kV
ESD IEC61000-4-2(Contact)		±30	
Operating Junction Temperature	T_J	-55 to +150	^{o}C
Storage Temperature Range	T_{STG}	-55 to +150	^{o}C

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Electrical Characteristics $(T_A=25^{o}C$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage (24V)	V_{RWM}	-	-	-	24	V
Reverse Stand-Off Voltage (15V)		-	-	-	15	V
Reverse Breakdown Voltage (24V)	V_{BR}	$I_{BR}=5mA$	25.4	-	30.3	V
Reverse Breakdown Voltage (15V)			17.1	-	20.3	V
Reverse Leakage Current (24V)	I_R	$V_R=24V$	-	1	50	nA
Reverse Leakage Current (15V)		$V_R=15V$	-	1	50	
Clamping Voltage (24V)	V_{CL}	$I_{PP}=1A$, $t_P=8/20\mu s$	-	-	40	V
		$I_{PP}=3A$, $t_P=8/20\mu s$	-	-	50	
Clamping Voltage (15V)		$I_{PP}=1A$, $t_P=8/20\mu s$	-	-	25	
		$I_{PP}=5A$, $t_P=8/20\mu s$	-	-	35	
Off State Junction Capacitance	C_J	0Vdc Bias f=1MHz	-	13	17	pF

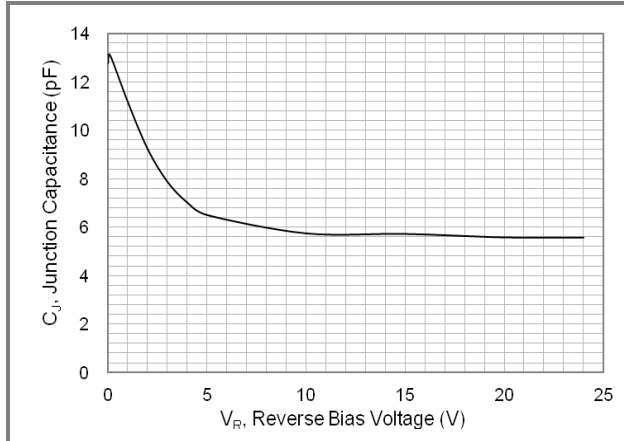## TYPICAL CHARACTERISTIC CURVES

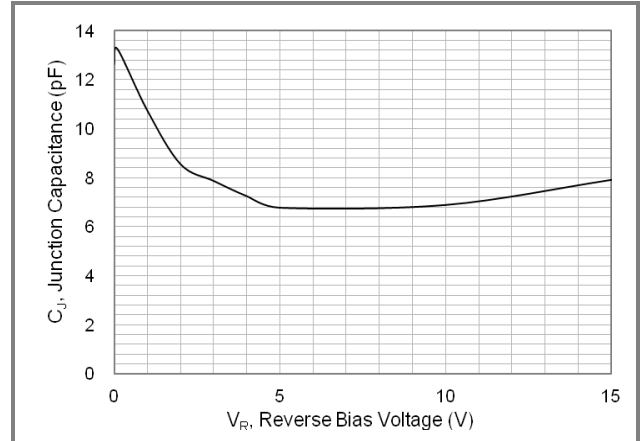**Fig.1 Typical Junction Capacitance(24V)**

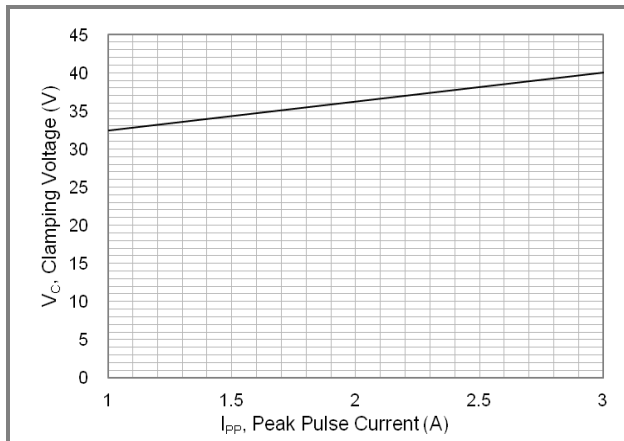

Fig.2 Typical Junction Capacitance(15V)

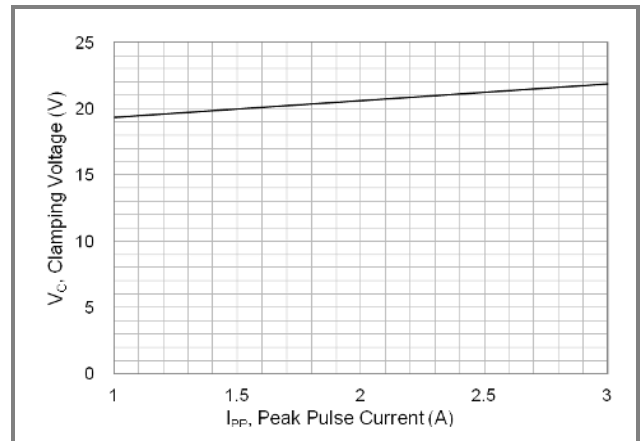**Fig.3 Typical Peak Clamping Voltage(8/20μs)(24V)**

Fig.4 Typical Peak Clamping Voltage(8/20μs)(15V)
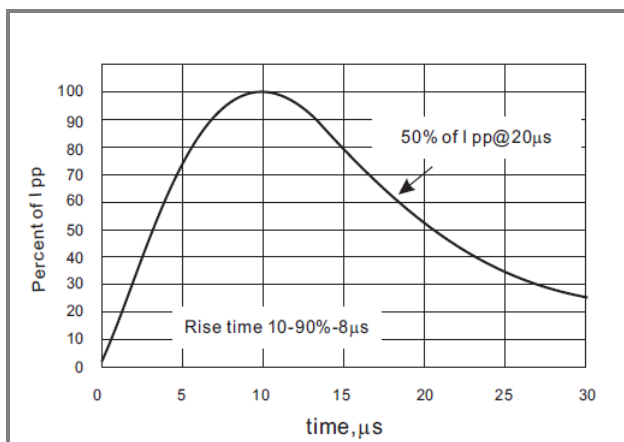

Fig.5 8/20μs Pulse Waveform
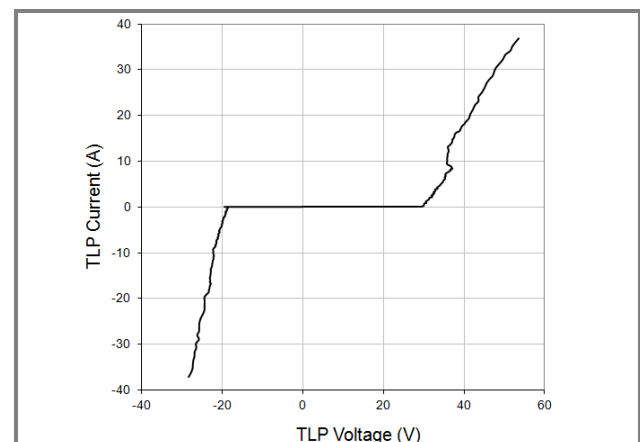
Fig.6 Transmission Line Pulsing (TLP) Measurement

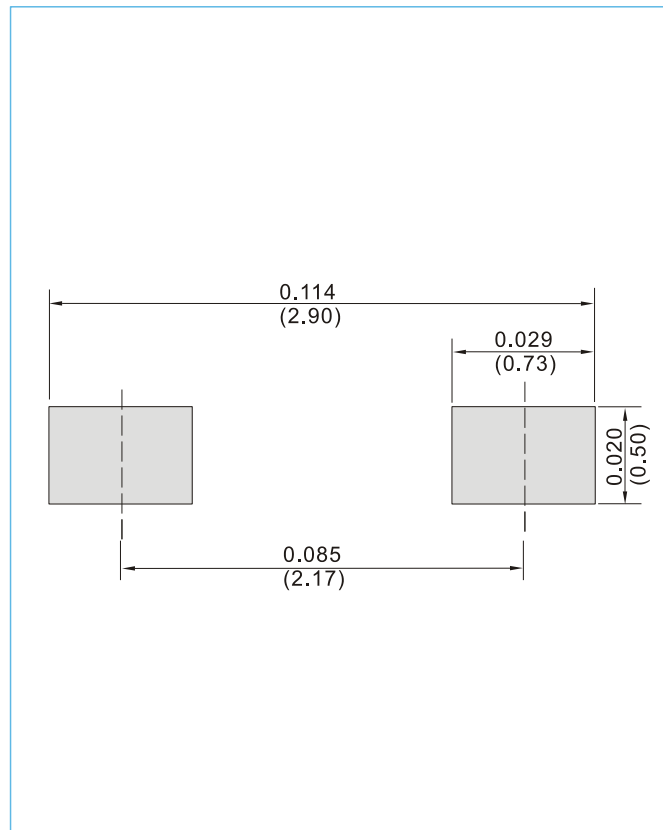## MOUNTING PAD LAYOUT

SOD-323	Unit：inch(mm)

0.114
(2.90)

0.029
(0.73)

0.020
(0.50)

0.085
(2.17)

ORDER INFORMATION

- Packing information
  T/R – 12K per 13" plastic Reel
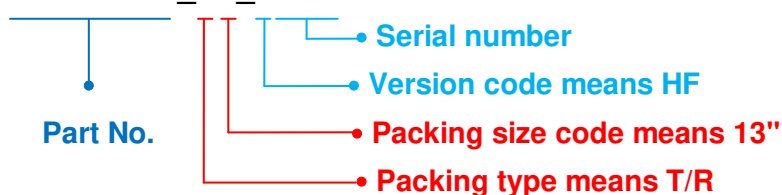 T/R – 5K per 7" plastic Reel

PJEC2415VM1WS

Part No_packing code_Version

PJEC2415VM1WS_R1_00001

PJEC2415VM1WS_R2_00001

For example :

RB500V-40_R2_00001

- **Serial number**
- **Version code means HF**
- **Packing size code means 13"**
- **Packing type means T/R**

Part No.

Packing Code XX				Version Code XXXXX		
Packing type	**1st Code**	**Packing size code**	**2nd Code**	**HF or RoHS**	**1st Code**	**2nd~5th Code**
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

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