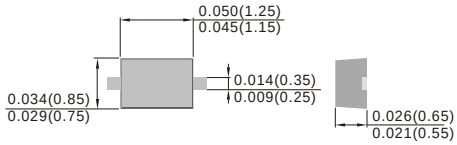
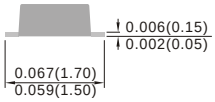
PJSD03TS~PJSD36TS

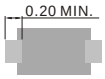
SINGLE LINE TVS DIODE FOR ESD PROTECTION PORTABLE ELECTRONICS

VOLTAGE 3~36 Volt **POWER** 120 Watt

SOD-523 Unit : inch(mm)





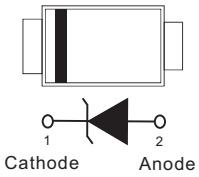


FEATURES

- 120 Watts peak pules power(tp=8/20μs)
- Small package for use in portable electronics
- Suitable replacement for MLV'S in ESD protection applications
- Low clamping voltage and leakage current
- Lead free in compliance with EU RoHS 2011/65/EU directive

APPLICATIONS

- Case: SOD-523 plastic
- Terminals : Solderable per MIL-STD-750,Method 2026
- Approx Weight: 0.00005 ounces, 0.0014 grams
- Marking : PJSD03TS : KD
  PJSD05TS : KE
  PJSD07TS : KF
  PJSD08TS : KR
  PJSD12TS : LE
  PJSD15TS : LM
  PJSD24TS : LZ
  PJSD36TS : MP



MAXIMUM RATINGS AND ELECTRICAL CHATACTERISTICS

ABSOLUTE MAXIMUM RATING

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation (tp=8/20 μs)	P_{PP}	120	W
ESD Voltage	V_{ESD}	25	KV
Operating Temperature	T_J	-50 to +150	°C
Storage Temperature	T_{STG}	-50 to +150	°C

ELECTRICAL CHATACTERISTICS

PJSD03TS

Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	3.3	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	4	-	-	V
Reverse Leakage Current	I_R	V_R=3.3V	-	-	200	μA
Clamping Voltage(8/20μs)	V_C	I_{PP}=5A	-	-	6.5	V
Off State Junction Capacitance	C_J	0Vdc Bias=f=1MHz	-	-	200	pF
Off State Junction Capacitance	C_J	3.3Vdc Bias=f=1MHz	-	-	100	pF

PJSD03TS~PJSD36TS

PJSD05TS						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	6.0	-	-	V
Reverse Leakage Current	I_R	V_R=5V	-	-	5	µA
Clamping Voltage(8/20µs)	V_C	I_{PP}=5A	-	-	9	V
Off State Junction Capacitance	C_J	0Vdc Bias=f=1MHz	-	-	110	pF
Off State Junction Capacitance	C_J	5Vdc Bias=f=1MHz	-	-	60	pF

PJSD07TS						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	7.0	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	7.5	-	-	V
Reverse Leakage Current	I_R	V_R=7V	-	-	150	nA
Clamping Voltage(8/20µs)	V_C	I_{PP}=8.8A	-	-	22.7	V
Off State Junction Capacitance	C_J	0Vdc Bias=f=1MHz	-	-	85	pF

PJSD08TS						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	8	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	8.5	-	-	V
Reverse Leakage Current	I_R	V_R=8V	-	-	5	µA
Clamping Voltage(8/20µs)	V_C	I_{PP}=5A	-	-	13	V
Off State Junction Capacitance	C_J	0Vdc Bias=f=1MHz	-	-	70	pF

PJSD12TS						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	12	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	13.3	-	-	V
Reverse Leakage Current	I_R	V_R=12V	-	-	5	µA
Clamping Voltage(8/20µs)	V_C	I_{PP}=5A	-	-	17	V
Off State Junction Capacitance	C_J	0Vdc Bias=f=1MHz	-	-	60	pF

PJSD03TS~PJSD36TS

PJSD15TS						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	15	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	16.6	-	-	V
Reverse Leakage Current	I_R	V_R=15V	-	-	5	µA
Clamping Voltage(8/20µs)	V_C	I_{PP}=5A	-	-	22	V
Off State Junction Capacitance	C_J	0Vdc Bias=f=1MHz	-	-	50	pF

PJSD24TS						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	24	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	26.7	-	-	V
Reverse Leakage Current	I_R	V_R=24V	-	-	5	µA
Clamping Voltage(8/20µs)	V_C	I_{PP}=3A	-	-	32	V
Off State Junction Capacitance	C_J	0Vdc Bias=f=1MHz	-	-	25	pF

PJSD36TS						
Parameter	Symbol	Conditions	Min.	Typical	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	36	V
Reverse Breakdown Voltage	V_{BR}	I_{BR}=1mA	40	-	-	V
Reverse Leakage Current	I_R	V_R=36V	-	-	5	µA
Clamping Voltage(8/20µs)	V_C	I_{PP}=1A	-	-	55	V
Off State Junction Capacitance	C_J	0Vdc Bias=f=1MHz	-	-	20	pF

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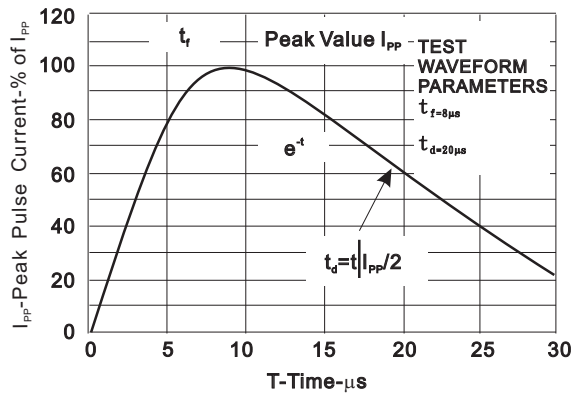

FIG. 1- Pulse Wave Form

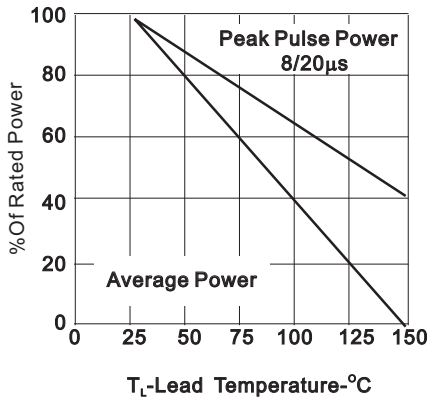

FIG. 2-Power Derating Curve

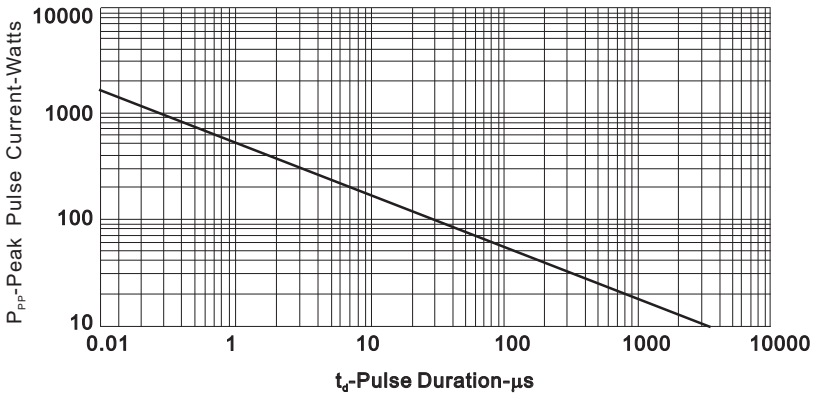

FIG. 3-Peak Pulse Power vs Pulse Time

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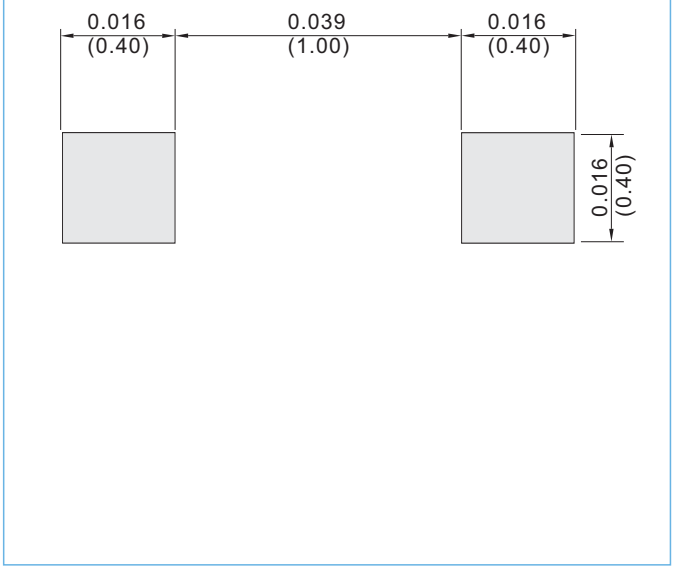
MOUNTING PAD LAYOUT

SOD-523 Unit : inch(mm)



ORDER INFORMATION

- Packing information

  T/R - 12K per 13" plastic Reel

  T/R - 5K per 7" plastic Reel

PJSD03TS~PJSD36TS

Part No_packing code_Version

PJSD03TS_R1_00001
PJSD03TS_R2_00001

For example :

RB500V-40_R2_00001

- Part No.
- Serial number
- Version code means HF
- Packing size code means 13"
- Packing type means T/R

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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