



# PJSD03TS~PJSD36TS

## SINGLE LINE TVS DIODE FOR ESD PROTECTION PORTABLE ELECTRONICS

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

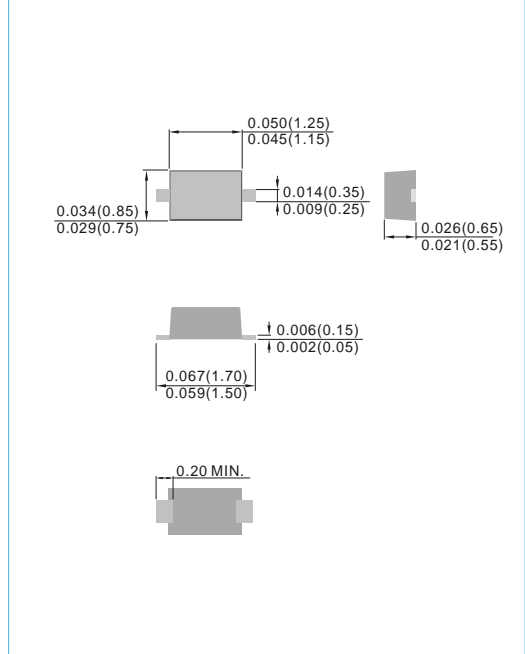
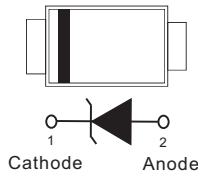
**SOD-523** Unit : inch(mm)

### FEATURES

- 120 Watts peak pules power(  $t_p=8/20\mu s$ )
- 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
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### 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 CHARACTERISTICS

#### ABSOLUTE MAXIMUM RATING

Rating	Symbol	Value	Units
Peak Pulse Power Dissipation ( $t_p=8/20 \mu s$ )	$P_{PP}$	120	W
ESD Voltage	$V_{ESD}$	25	KV
Operating Temperature	$T_J$	-50 to +150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-50 to +150	$^{\circ}C$

### ELECTRICAL CHARACTERISTICS

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	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=5A$	-	-	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



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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	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=5A$	-	-	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(8/20 $\mu s$ )	$V_C$	$I_{PP}=8.8A$	-	-	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	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=5A$	-	-	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	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=5A$	-	-	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	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=5A$	-	-	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	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=3A$	-	-	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	$\mu A$
Clamping Voltage(8/20 $\mu s$ )	$V_C$	$I_{PP}=1A$	-	-	55	V
Off State Junction Capacitance	$C_J$	0Vdc Bias=f=1MHz	-	-	20	pF



# PJSD03TS~PJSD36TS

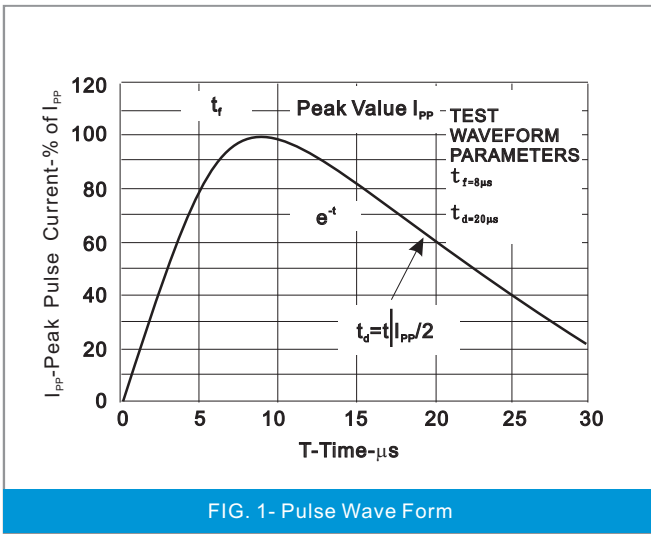


FIG. 1- Pulse Wave Form

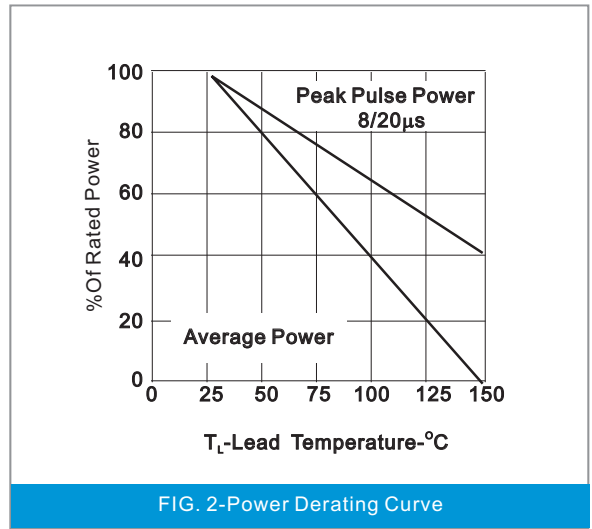


FIG. 2-Power Derating Curve

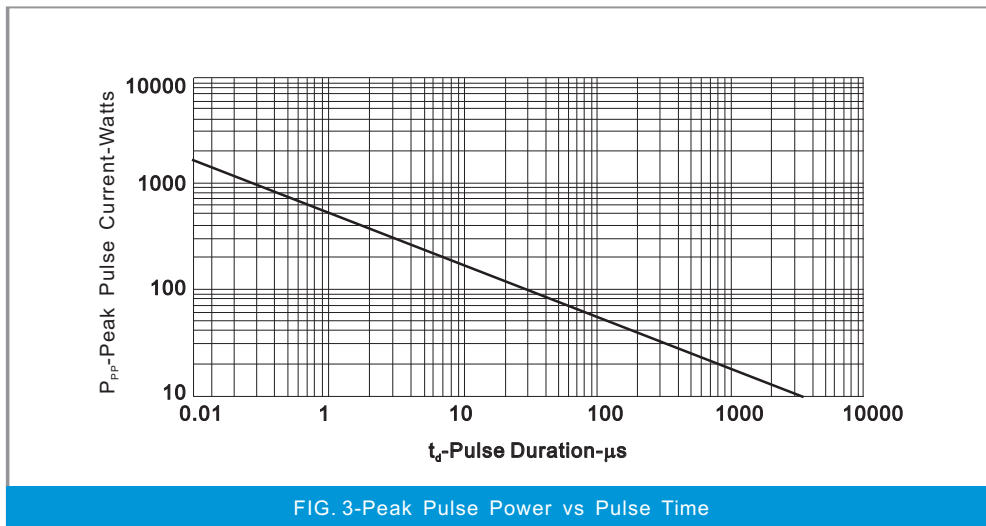


FIG. 3-Peak Pulse Power vs Pulse Time

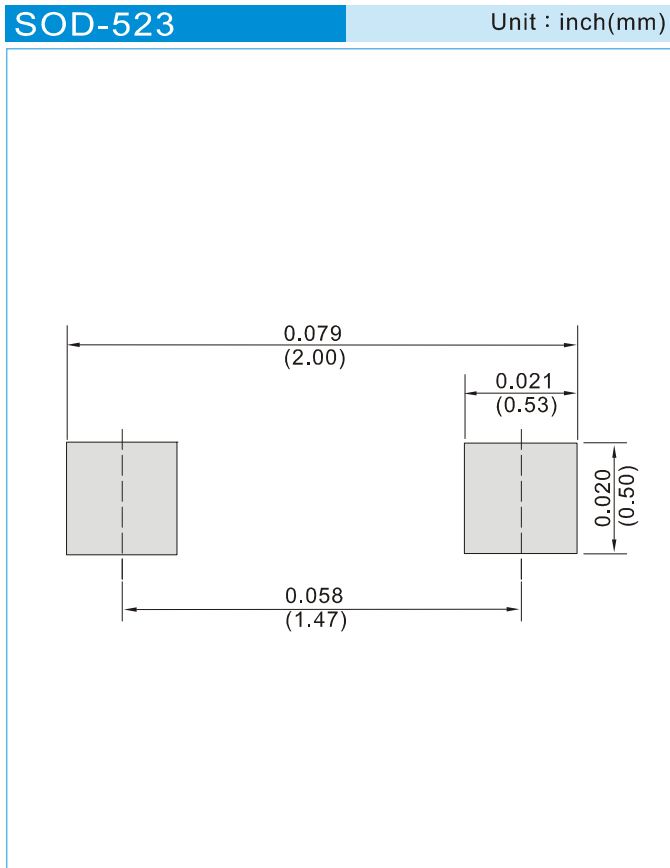


# PJSD03TS~PJSD36TS

## PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing Type	Marking	Version
PJSD03TS_R1_00001	SOD-523	5K pcs / 7" reel	KD	Halogen free
PJSD03TS_R2_00001	SOD-523	12K pcs / 13" reel	KD	Halogen free

## MOUNTING PAD LAYOUT





## PJSD03TS~PJSD36TS

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