

PJDLC03~PJDLC24

VOLTAGE 3.3 to 24 Volts **POWER** 400 Watts

ULTRA LOW CAPACITANCE DUAL TRANSIENT VOLTAGE SUPPRESSOR FOR HIGH SPEED DATA LINES

This transient overvoltage suppressor is intended to protect sensitive equipment against electrostatic discharge events as well to offer a minimum insertion loss in data transmission lines in communications ports used in portable consumer, computing and networking applications. This dual transient voltage suppressor comes in a single SOT-23, offering board space reduction, where the application requires it.

FEATURES

- Maximum capacitance @ 0 Vdc Bias of 1.2 pF between terminals 1-3 or terminals 2-3
- IEC61000-4-2 esd 15kV Air, 8kV contact compliance
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: SOT-23, plastic
- Terminals: solderable per MIL-STD-750, Method 2026
- Apporx. Weight: 0.0003 ounce, 0.0084 gram

SOT-23

Unit : inch(mm)

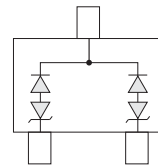
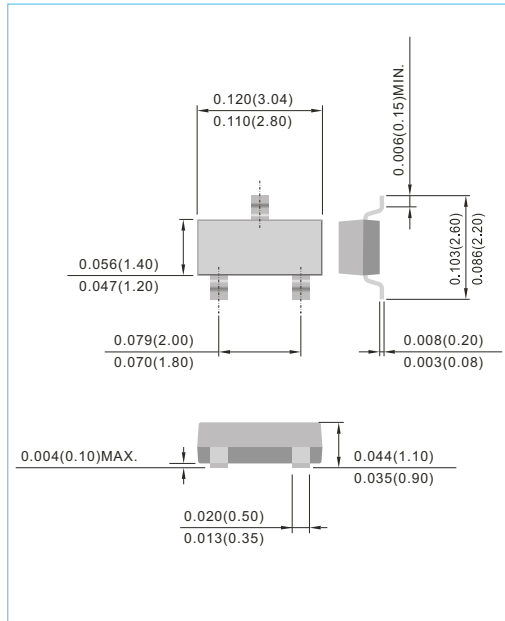


Fig.21

MAXIMUM RATINGS

Parameter	Symbol	Value	Units
Operating Junction	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

PJDLC03 Marking DL3						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V _{RWM}	-	-	-	3.3	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	4	-	-	V
Reverse Leakage Current	I _R	V _{RWM} = 3.3V, T = 25°C	-	-	50	μA
Clamping Voltage	V _C	I _{PP} = 1A t _p = 8/20 μs	-	-	6.5	V
Clamping Voltage	V _C	I _{PP} = 5A t _p = 8/20 μs	-	-	8	V
Junction Capacitance	C _J	Between pin1.2 to 3 V _R =0V,f=1MHz	-	-	1.2	pF



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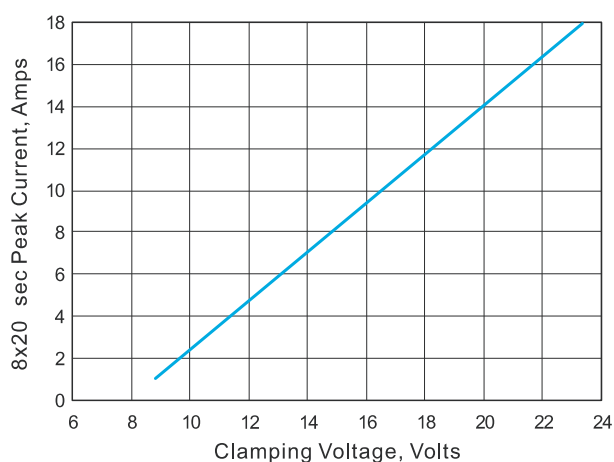
PJDLC05 Makring T2S						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	6	-	-	V
Reverse Leakage Current	I_R	$V_{RWM} = 5V,$ $T = 25^{\circ}C$	-	-	20	μA
Clamping Voltage	V_C	$I_{PP} = 1A$ $t_p = 8/20 \mu s$	-	-	9.8	V
Clamping Voltage	V_C	$I_{PP} = 5A$ $t_p = 8/20 \mu s$	-	-	11	V
Junction Capacitance	C_J	Between pin1.2 to 3 $V_R = 0V, f = 1MHz$	-	-	0.65	pF

PJDLC12 Makring DJ2						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	12	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	13.3	-	-	V
Reverse Leakage Current	I_R	$V_{RWM} = 12V,$ $T = 25^{\circ}C$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP} = 1A$ $t_p = 8/20 \mu s$	-	-	19	V
Clamping Voltage	V_C	$I_{PP} = 5A$ $t_p = 8/20 \mu s$	-	-	24	V
Junction Capacitance	C_J	Between pin1.2 to 3 $V_R = 0V, f = 1MHz$	-	-	1.2	pF

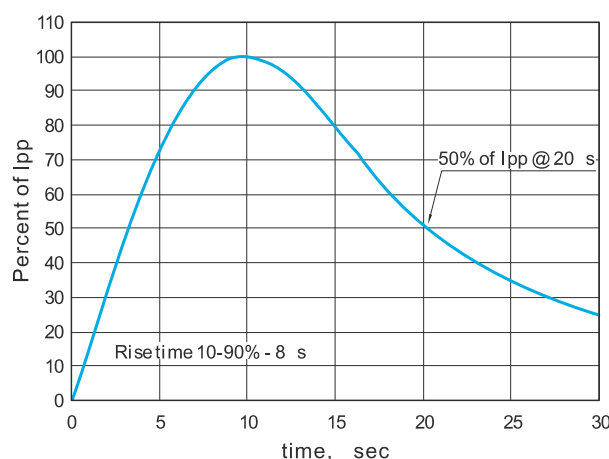
PJDLC15 Makring DJ5						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	15	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	16.7	-	-	V
Reverse Leakage Current	I_R	$V_{RWM} = 15V,$ $T = 25^{\circ}C$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP} = 1A$ $t_p = 8/20 \mu s$	-	-	24	V
Clamping Voltage	V_C	$I_{PP} = 5A$ $t_p = 8/20 \mu s$	-	-	30	V
Junction Capacitance	C_J	Between pin1.2 to 3 $V_R = 0V, f = 1MHz$	-	-	1.2	pF

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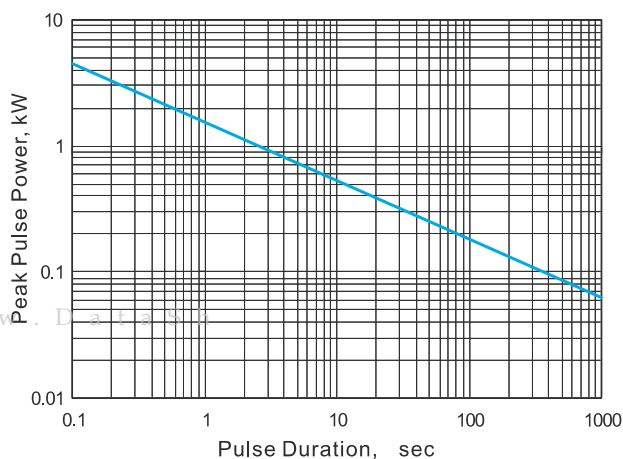
PJDLC24 Marking DJ4						
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	-	-	-	24	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	26.7	-	-	V
Reverse Leakage Current	I_R	$V_{RWM} = 24V$, $T = 25^{\circ}C$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP} = 1A$ $t_p = 8/20 \mu s$	-	-	43	V
Clamping Voltage	V_C	$I_{PP} = 5A$ $t_p = 8/20 \mu s$	-	-	55	V
Junction Capacitance	C_J	Between Pin 1.2 to 3 $V_R = 0V$, $f = 1MHz$	-	-	1.2	pF



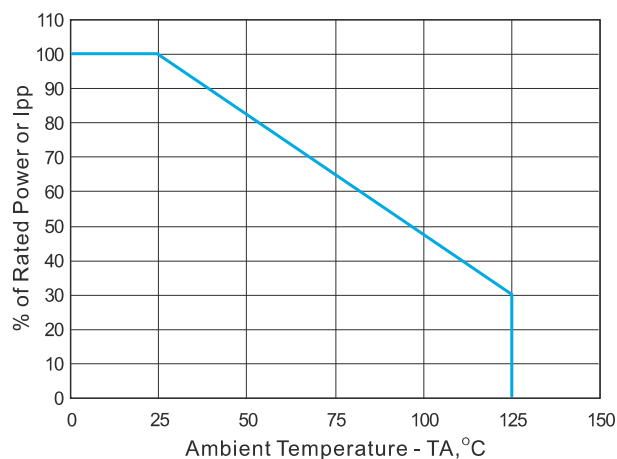
Clamping Voltage vs Ipp 8x20 sec



Pulse Waveform



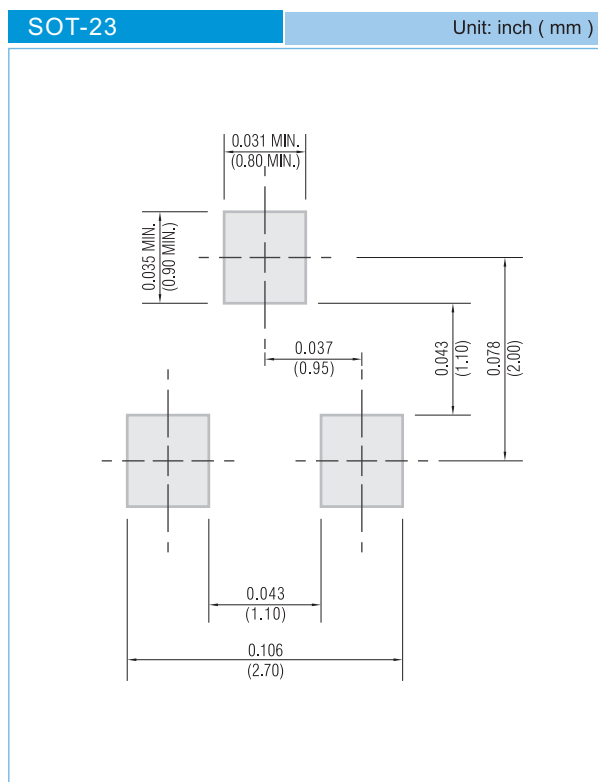
Non-Repetitive Peak Pulse Power vs Pulse Time



Power Derating Curve

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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 12K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

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