



DWLC553T5V4U ESD Protection Diode

Feature

- Uni-directional ESD protection of four lines
- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Junction Capacitance: 0.3pF(Typ, Between I/O pins)
- Low leakage current
- Low clamping voltage
- IEC 61000-4-2 $\pm 12kV$ contact $\pm 17kV$ air
- EC 61000-4-4 EFT Protection 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 4A (8/20 μs)

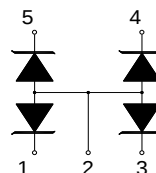
Application

- Cellular Handsets & Accessories
- Cordless Phones
- Personal Digital Assistants (PDA's)
- Portable Instrumentation
- Notebooks & Handhelds
- Digital Cameras

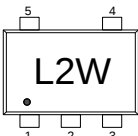
Mechanical Data

- Package: SOT-553
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE compliant

Circuit Diagram



Ordering Information

Part Number	Package	Marking	QTY per Reel	Reel Size
DWLC553T5V4U	SOT-553		3000 pcs	7 inches



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

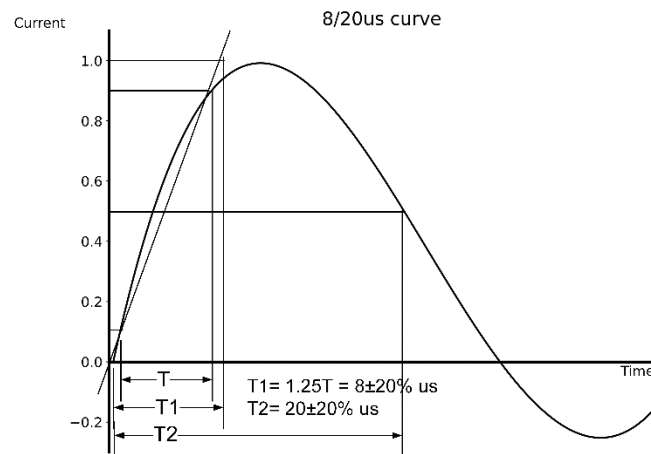
Parameter	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)	P_{PK}	-	60	W
Peak pulse current ($t_p=8/20\mu\text{s}$)	I_{PP}		4.0	A
ESD (IEC61000-4-2 air discharge)	V_{ESD}	-	± 17	kV
ESD (IEC61000-4-2 contact discharge)	V_{ESD}	-	± 12	kV
Junction temperature	T_J	-	150	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40	125	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55	150	$^{\circ}\text{C}$
Lead temperature	T_L	-	260	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

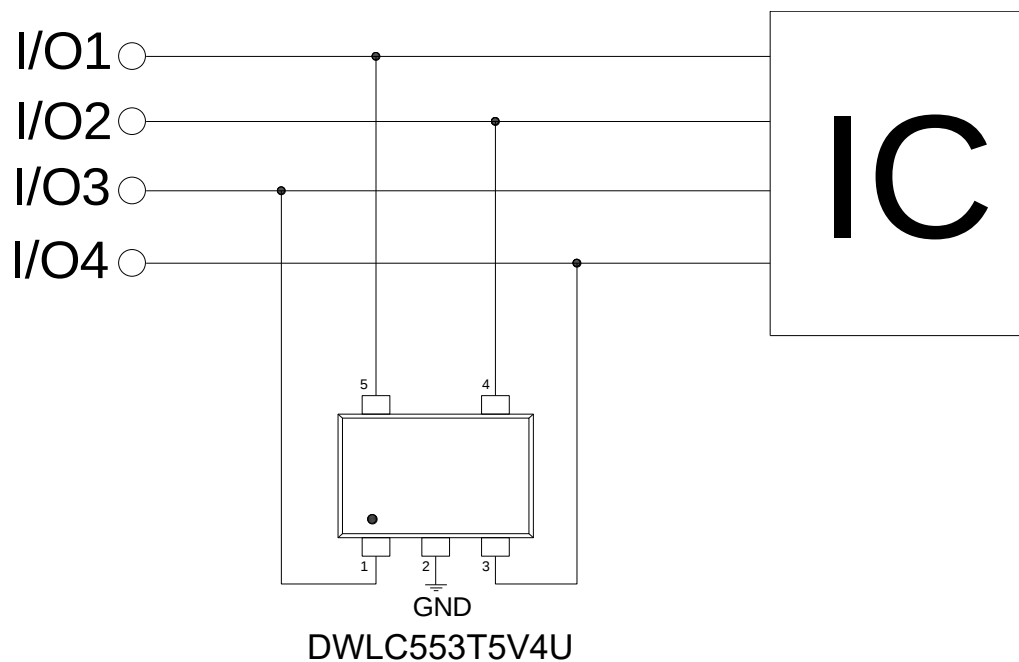
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6.0			V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}$			1.0	μA
Peak Pulse Current	I_{PP}	$T_P=8/20\mu\text{s}@25^{\circ}\text{C}$		4.0		A
Clamping Voltage	V_{CL}	$I_{PP}=1.0\text{A}$; $T_P=8/20\mu\text{s}$		9.5	12.0	V
Clamping Voltage	V_{CL}	$I_{PP}=4.0\text{A}$; $T_P=8/20\mu\text{s}$		12.0	15.0	V
Junction capacitance	C_J	I/O pins to ground; $V_R=0\text{V}$; $f=1\text{MHz}$		0.6	0.8	pF
		Between I/O pins; $V_R=0\text{V}$; $f=1\text{MHz}$		0.3	0.4	



Typical Characteristics

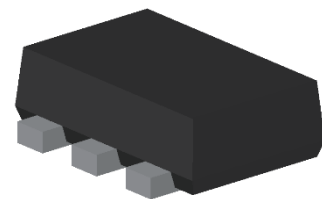
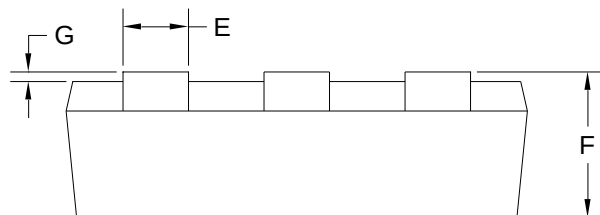
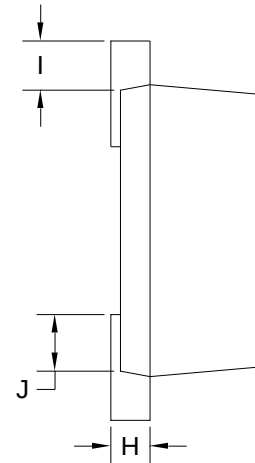
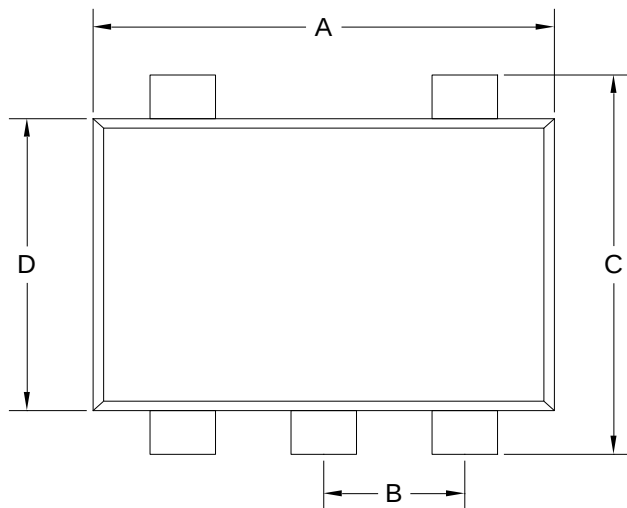


Typical Application



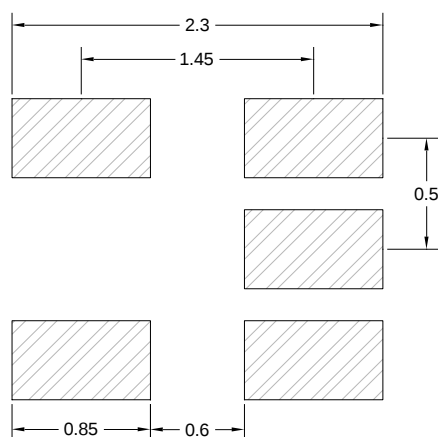


SOT-553 Dimensions and Land Pattern



Units in millimeters

Symbol	A	B	C	D	E	F	G	H	I	J
Min.	1.50	0.50	1.55	1.10	0.15	0.50	0.00	0.10	0.10	0.15
Max.	1.70	0.60	1.70	1.25	0.30	0.60	0.05	0.18	0.30	0.20



Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference only