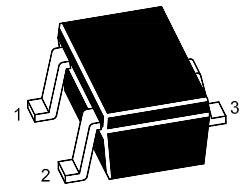
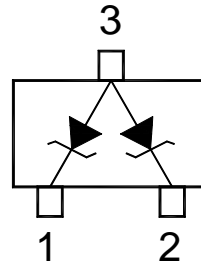


ESDUL7205CAW

ESD Protection Diode

Features

- Low capacitance
- Low ESD clamping voltage



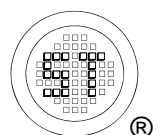
1.I/O1 2.I/O2 3.GND
SOT-323 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
IEC61000-4-2(ESD) Air Contact	V_{ESD}	± 23 ± 23	KV
Operating Junction Temperature Range	T_j	- 55 to + 125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Stand-Off Voltage	V_{RWM}	-	-	5	V
Reverse Breakdown Voltage at $I_{\text{R}} = 1 \text{ mA}$, I/O pin to GND	$V_{(\text{BR})\text{R}}$	5.2	-	8	V
Reverse Current at $V_{\text{RWM}} = 5 \text{ V}$, I/O pin to GND	I_{R}	-	-	1	μA
ESD Clamping Voltage at $I_{\text{TLP}} = 8 \text{ A}$, $t_{\text{p}} = 0.2/100 \text{ ns}$, I/O pin to GND at $I_{\text{TLP}} = 16 \text{ A}$, $t_{\text{p}} = 0.2/100 \text{ ns}$, I/O pin to GND at $-I_{\text{TLP}} = 8 \text{ A}$, $t_{\text{p}} = 0.2/100 \text{ ns}$, GND to I/O pins at $-I_{\text{TLP}} = 16 \text{ A}$, $t_{\text{p}} = 0.2/100 \text{ ns}$, GND to I/O pins	V_{CL} V_{CL} $-V_{\text{CL}}$ $-V_{\text{CL}}$	- - - -	14 20 4 8	- - - -	V
Junction Capacitance at $V_{\text{R}} = 0 \text{ V}$, $f = 1 \text{ MHz}$, Between I/O pins and GND at $V_{\text{R}} = 0 \text{ V}$, $f = 1 \text{ MHz}$, Between I/O pins	C_j	- -	- -	0.85 0.4	pF



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Electrical Characteristics Curves

Fig 1. Pulse Waveform

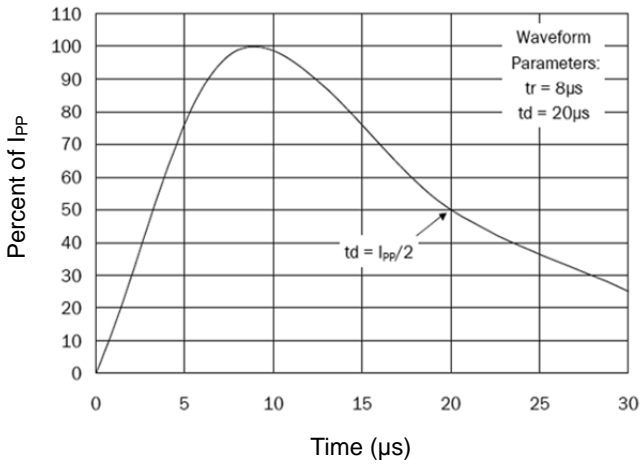


Fig 2. Power Derating Curve

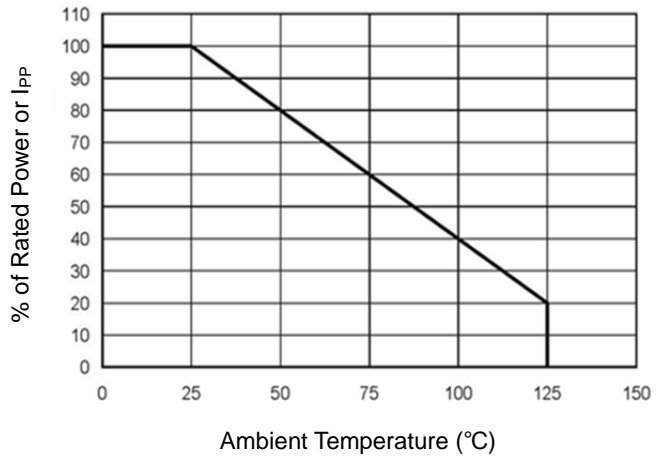


Fig. 3 Clamped - 8 kV pulse waveform

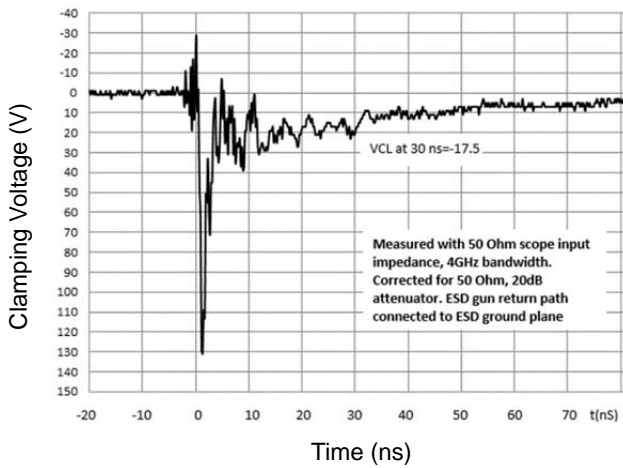


Fig. 4 Clamped + 8 kV pulse waveform

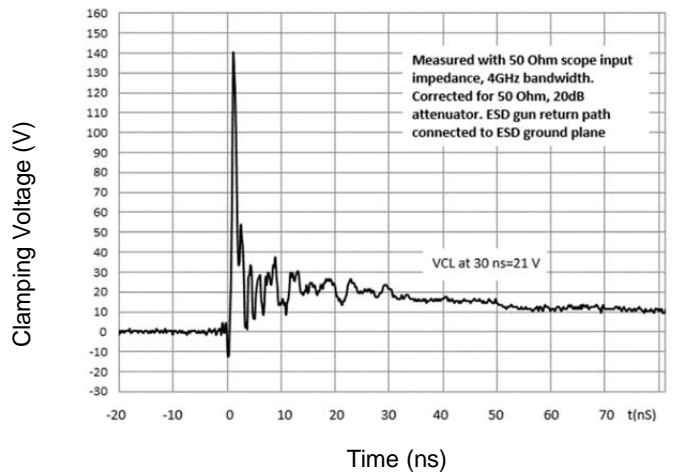


Fig. 5 TLP Curve

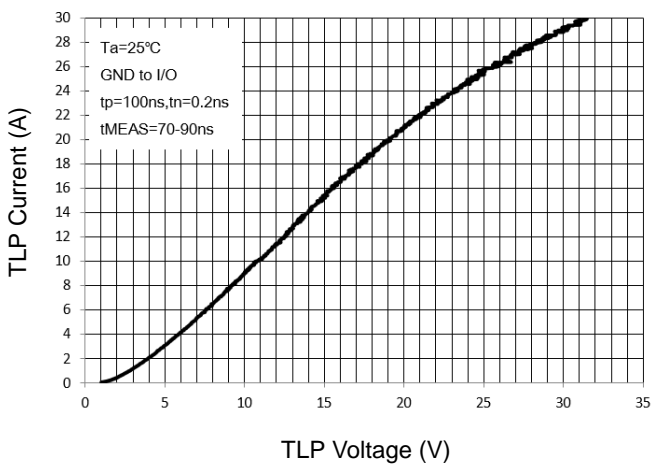
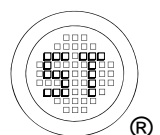
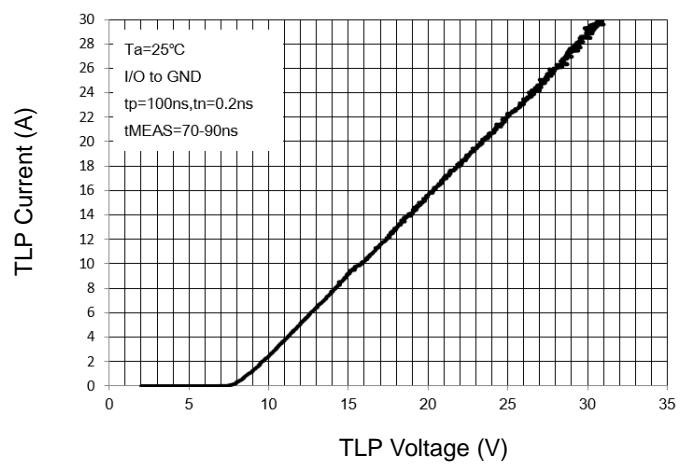


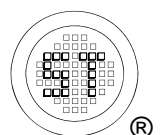
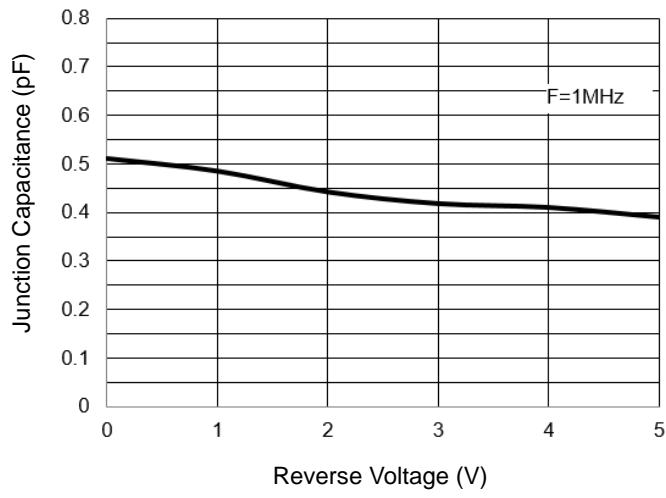
Fig. 6 TLP Curve



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Electrical Characteristics Curves

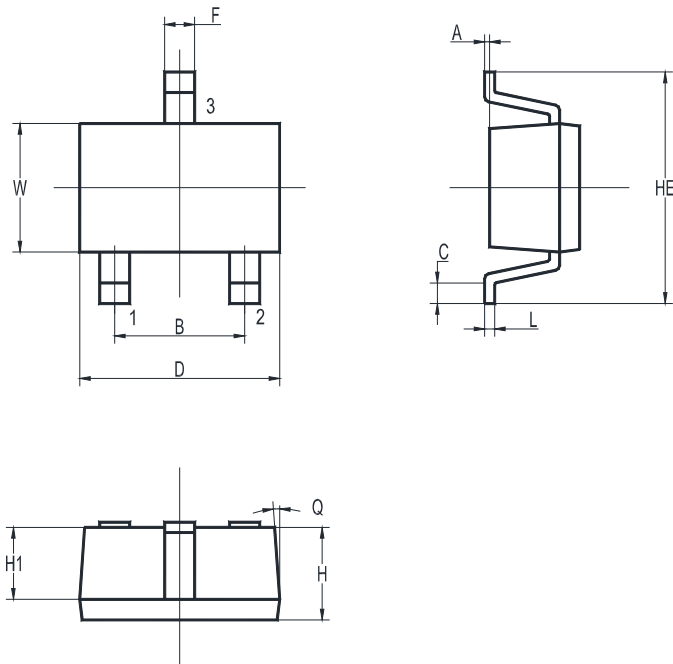
Fig 7. Junction Capacitance (I/O pins to GND)



ESDUL7205CAW

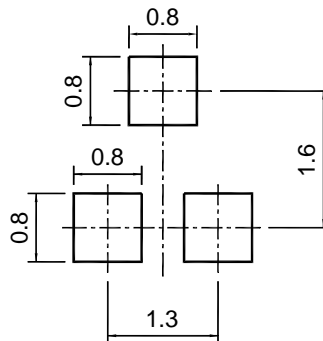
Package Outline Dimensions (Units: mm)

SOT-323



UNIT	A	B	C	D	H	H1	HE	F	L	W	Q
mm	0.1 MAX.	1.3 1.2	0.2 MIN.	2.1 1.9	1.0 0.8	0.7 TYP.	2.4 2.0	0.35 0.25	0.15 0.05	1.35 1.15	5° MAX.

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

- " E2 " = Part No.
 - " YM " = Date Code Marking
 - " Y " = Year
 - " M " = Month
- Font type: Arial

