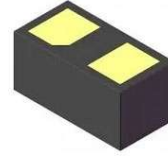


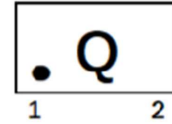
Features

- * Ultra low leakage: nA level
- * Ultra low capacitance
- * RoHS Compliant
- * REACH & SVHC Compliant
- * Halogen Compliant
- * DFN0603 Package

Package and Marking diagram

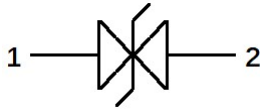


DFN0603



Top view

Circuit Diagram

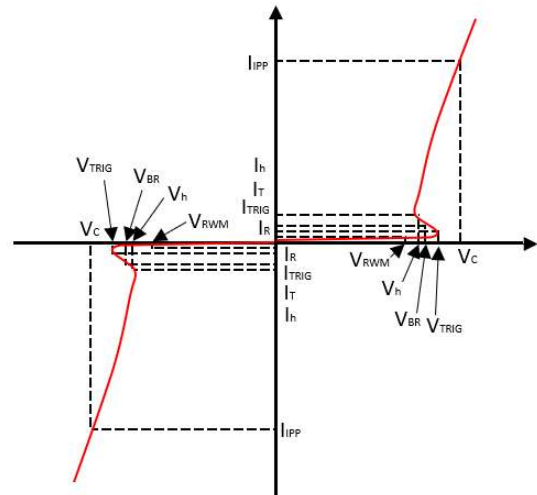


Ordering Information

Part Number	Packaging	Reel Size
ESD5311Z	10000/Tape & Reel	7 inch

Portion Electronics Parameter

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_h	Holding Voltage
I_h	Holding Current



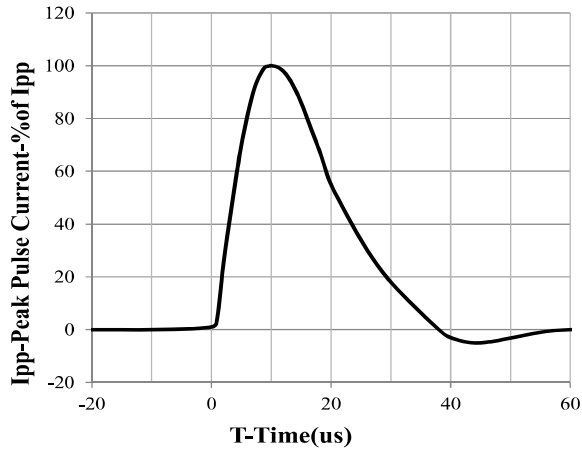
Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs pulse)	P_{pk}	88	W
Peak Pulse Current (8/20 μs pulse)	I_{PP}	5.5	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	T_J	-40 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

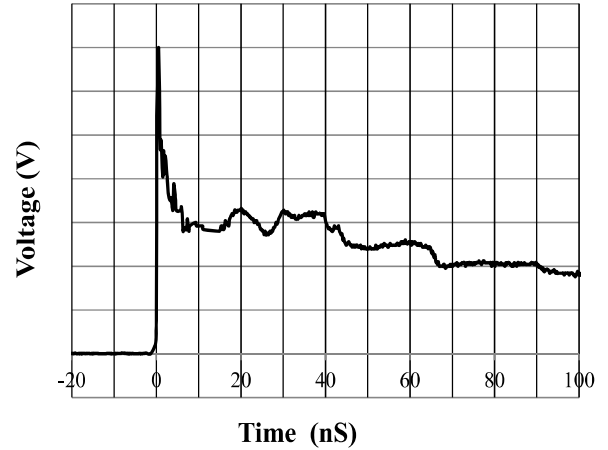
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_{\text{T}} = 1\text{mA}$	6		9	V
Reverse Leakage Current	I_{R}	$V_{\text{RWM}} = 5\text{V}$			100	nA
Hold Voltage	V_{h}	$I_{\text{h}} = 50\text{mA}$	5.5		6.5	V
Clamping Voltage	V_{C}	$I_{\text{PP}} = 1\text{A}$ (8/20 μs pulse)			9.0	V
Clamping Voltage	V_{C}	$I_{\text{PP}} = 5.5\text{A}$ (8/20 μs pulse)			16	V
Junction Capacitance	C_{J}	$V_{\text{R}} = 0\text{V}$, $f = 1\text{MHz}$		0.3	0.5	pF

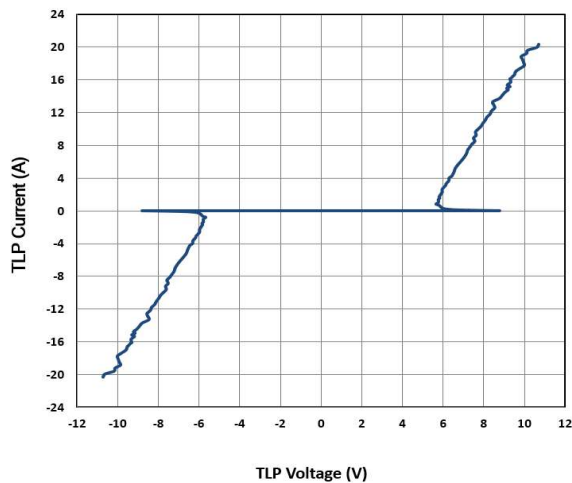
Typical Performance Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise Specified)



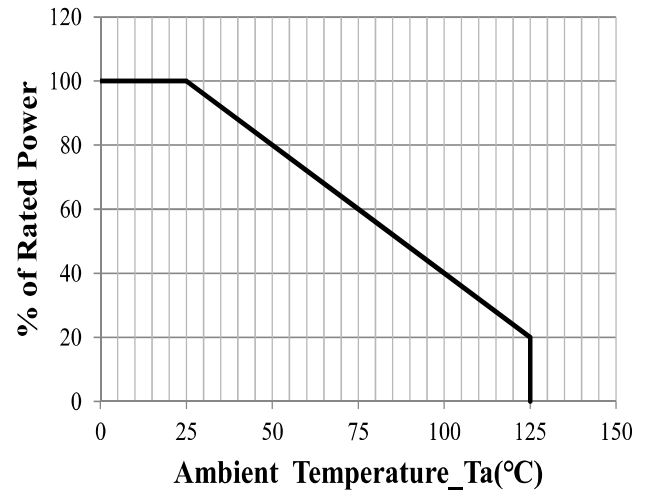
8 / 20us Pulse Waveform



IEC61000-4-2 Pulse Waveform

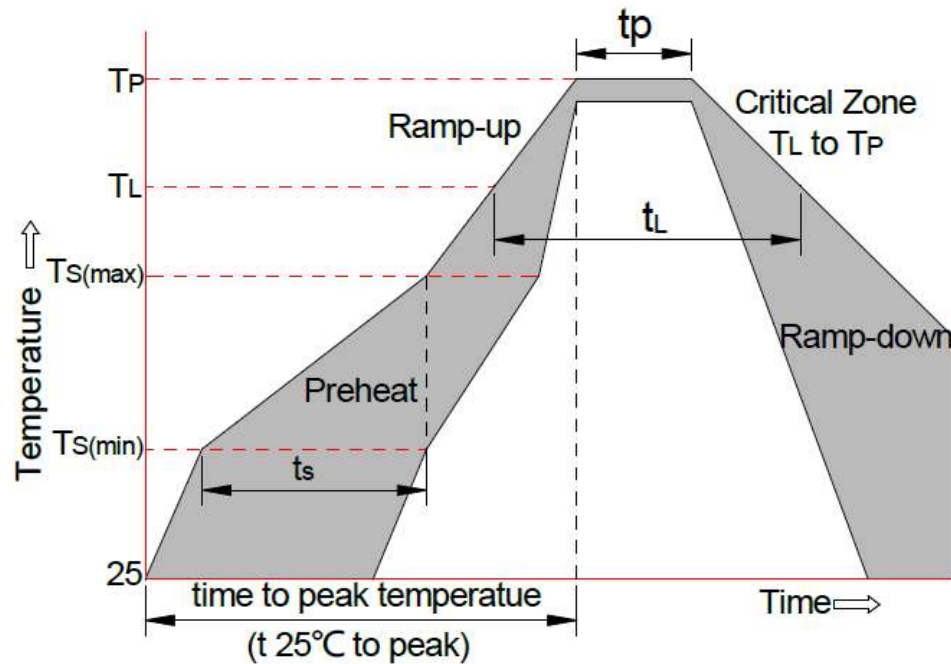


TLP Measurement



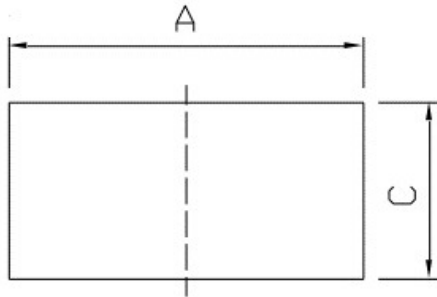
Power Derating Curve

Soldering Parameters



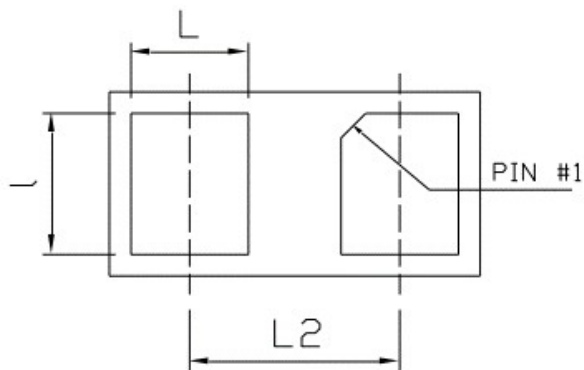
Reflow Conditions		Pb-Free Assembly
Pre-heat	-Temperature Min ($T_{S (min)}$)	+150°C
	-Temperature Max ($T_{S (max)}$)	+200°C
	-Time (Min to Max) (t_s)	60-180 secs
Average ramp up rate(Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{S (max)}$ to T_L -Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature (T_L) (Liquid us)	+217°C
	-Temperature (t_L)	60-150 secs
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

DFN0603 Package Outline Drawing

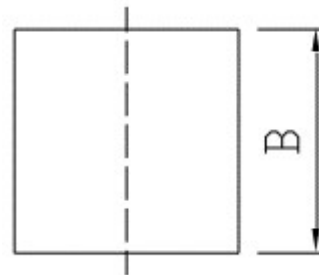


TOP VIEW

SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	Min	Typ	Max	Min	Typ	Max
A	0.58	0.60	0.65	0.0228	0.0236	0.0256
B	0.28	0.30	0.35	0.0110	0.0118	0.0138
C	0.28	0.30	0.34	0.0110	0.0118	0.0134
L	0.16	0.19	0.22	0.0063	0.0075	0.0087
L2	0.34 REF			0.0134 REF		
1	0.20	0.23	0.26	0.0079	0.0091	0.0102

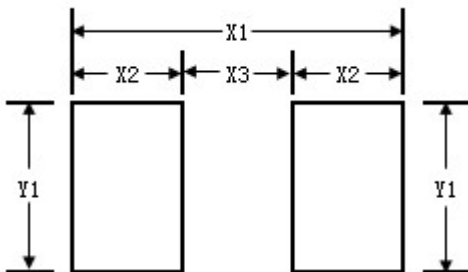


BOTTOM VIEW



SIDE VIEW

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X1	0.620	0.0240
X2	0.240	0.0094
X3	0.140	0.0055
Y1	0.300	0.0118

Note:

The land pattern is for reference purposes only.