

AMB0510D1

ESD Protection Diode

VOLTAGE 5 Volt

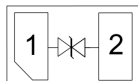
FEATURES

- Ultra small package
- Ultra low capacitance: 0.4pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- 2-pin leadless package
- IEC 61000-4-2 ±20KV air ; ±15KV contact
- IEC 61000-4-5 (Lightning) 4A (8/20μs)
- Lead free in compliance with EU RoHS
- Marking code: Q

MECHANICAL DATA

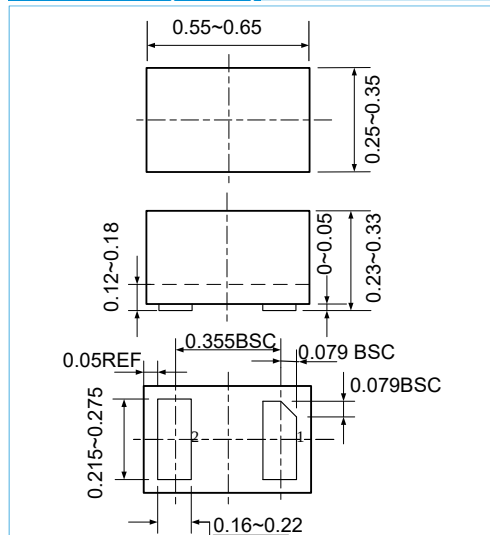
- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0

Schematic Diagram



DFN0603-2(0201)

Unit:mm

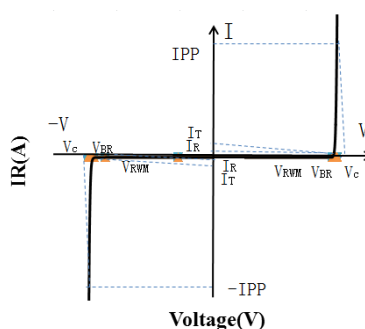


ABSOLUTE MAXIMUM RATINGS($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P_{PP}	80	W
Peak Pulse Current (8/20μs)	I_{PP}	4	A
Junction Temperature	T_J	-55 to +125	$^\circ\text{C}$
Storage temperature	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Parameters ($T=25^\circ\text{C}$)

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

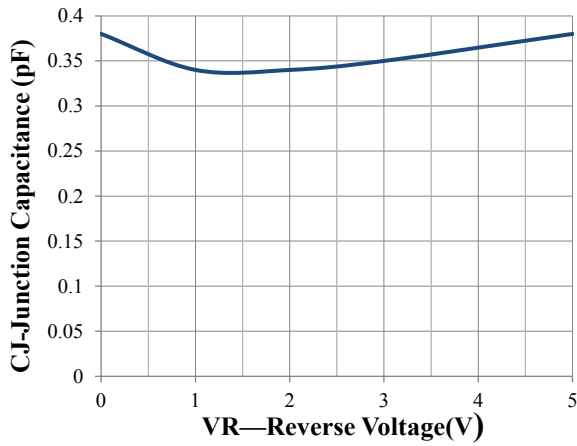


ELECTRICAL CHARACTERISTICS($T_A = 25^\circ\text{C}$ unless otherwise noted)

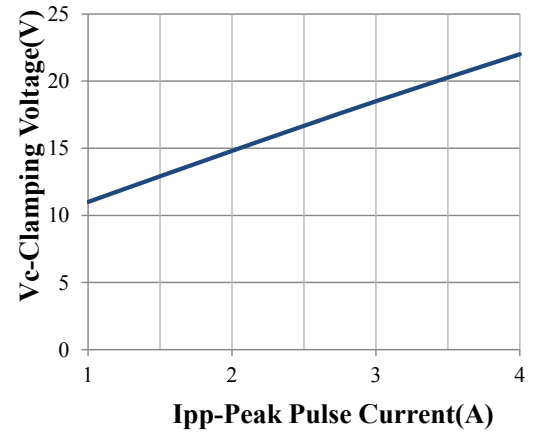
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6.0	7.5	8.5	V
Reverse Leakage Current	I_R	$V_R=5\text{V}$			0.5	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$			12	V
	V_C	$I_{PP}=4\text{A}, t_p=8/20\mu\text{s}$			20	V
Junction Capacitance	C_J	$V_R=0\text{V}, f=1\text{MHz}$		0.4	0.5	pF

AMB0510D1

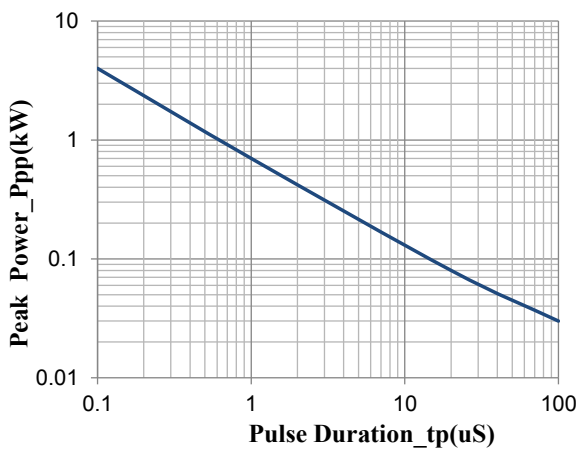
Typical Characteristics



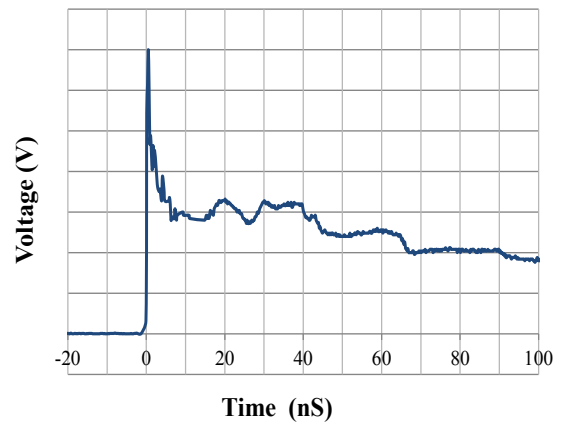
Junction Capacitance vs. Reverse Voltage



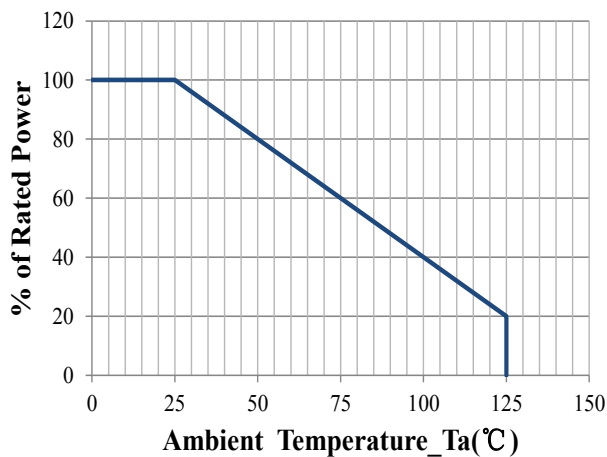
Clamping Voltage vs. Peak Pulse Current



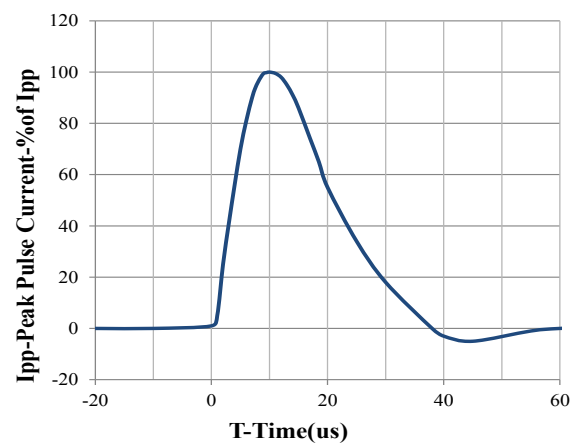
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



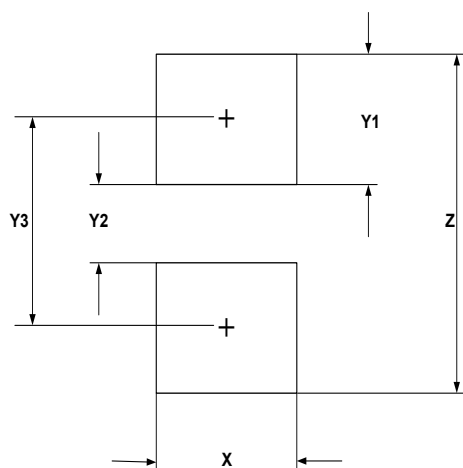
Power Derating Curve



8 X 20us Pulse Waveform

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MOUNTING PAD LAYOUT



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.30	0.012
Y1	0.25	0.010
Y2	0.15	0.006
Y3	0.40	0.016
Z	0.65	0.026

ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
AMB0510D1	DFN0603-2(0201)	7 Inch	10000