

ESD Diode

Peak Pulse Power - 50 Watts

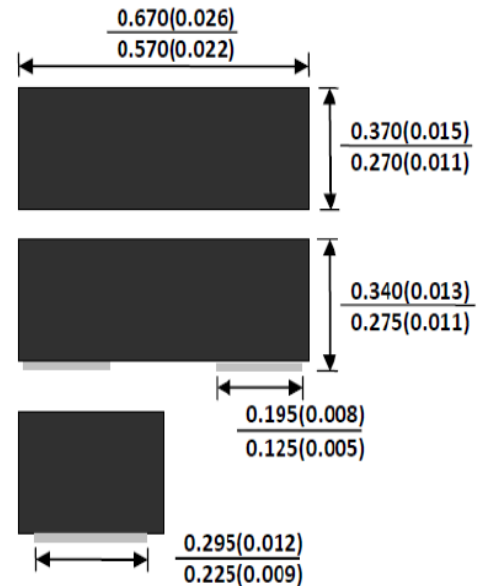
Features

- Halogen free.
- Surface mount package.
- Bi-directional ESD protection.
- IEC61000-4-2 25kV(Contact), 30kV(Air).
- Operating voltage: 5V

Mechanical Data

- Case: DFN0603(0201) standard package
- Terminals: Au / Sn plated, Solderable per MIL-STD-750, method 2026
- Mounting position: Any.
- Weight: 0.001 gram(approx.)
- MSL : Level 1
- Marking Code:I

DFN0603(0201)



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

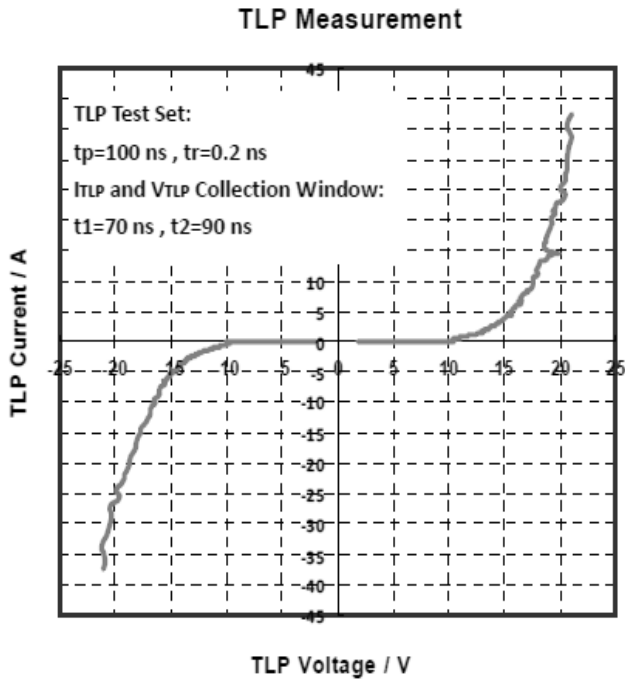
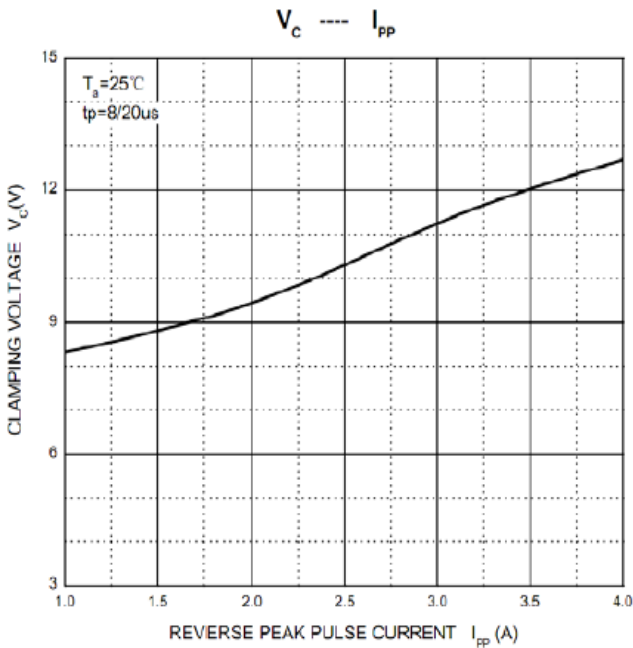
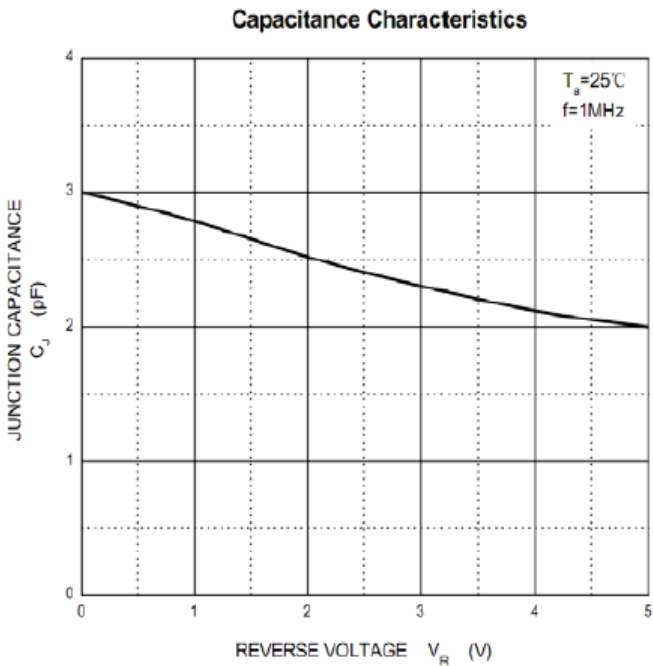
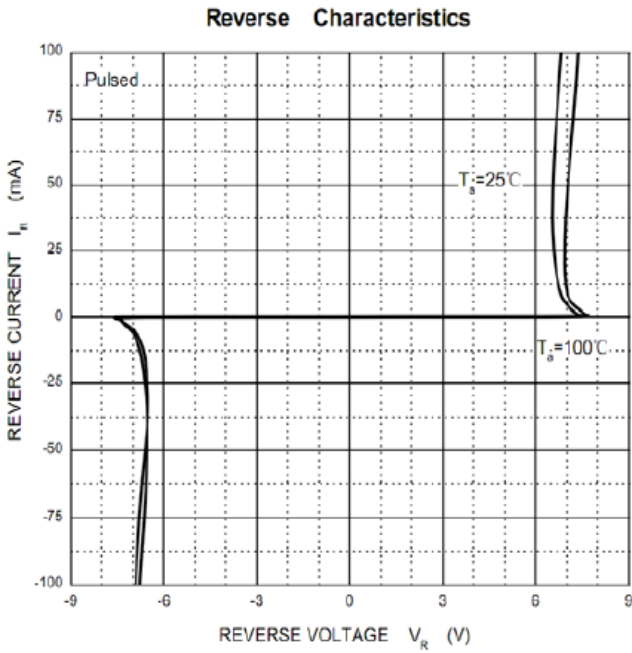
Characteristics	Symbol	Min	Typ	Max	Unit
Peak Pulse Power, $t_p = 8 / 20 \mu s$ (According to IEC61000-4-5)	P_{PK}		50		W
Maximum Peak Pulse Current , $t_p = 8 / 20 \mu s$ (According to IEC61000-4-5)	I_{pp}	3.5			A
ESD per IEC 61000-4-2 (Air)	V_{ESD}		± 30		kV
ESD per IEC 61000-4-2 (Contact)			± 25		kV
Operating Junction Temperature	T_j	-55		125	°C
Storage Temperature	T_{stg}	-55		150	°C
Reverse Stand-Off Voltage	V_{RWM}			5	V
Reverse Breakdown Voltage, $I_t = +1mA$	V_{BR}			9	V
$I_t = -1mA$				-9	
Reverse Leakage Current, $V_{RWM} = 5V$	I_R			10	nA
Clamping Voltage, $I_{pp} = 1.0A$, $t_p = 8/20 \mu s$	V_C			12	V
$I_{pp} = 3.0A$, $t_p = 8/20 \mu s$				17	
Clamping Voltage ¹ , $I_{pp} = -5A$, $t_{lp} = 0.2/100 ns$	V_C		-15		V
$I_{pp} = +5A$, $t_{lp} = 0.2/100 ns$			15		
$I_{pp} = -30A$, $t_{lp} = 0.2/100 ns$			-20		
$I_{pp} = +30A$, $t_{lp} = 0.2/100 ns$			20		
Junction Capacitance, Between I/O Pin and GND $V_R=0V$, $f=1MHz$	C_j		3	10	pF
Dynamic Resistance ^{1,2} , $T_p=100ns$	R_D		0.23		Ω

Notes: 1.TLP Settings: $t_p = 100ns$, $t_r = 0.2ns$, ITLP and VTLP averaging window: $t_1 = 70ns$ to $t_2 = 90ns$.

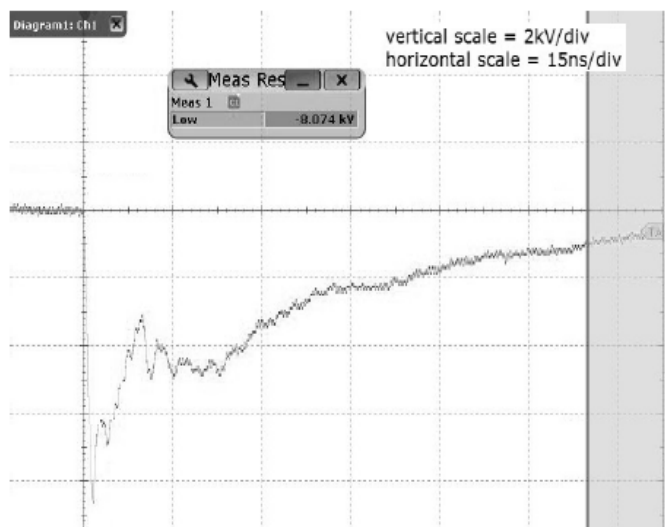
2.Dynamic resistance calculated from ITLP= -5A to ITLP= -30A and ITLP= +5A to ITLP= +30A

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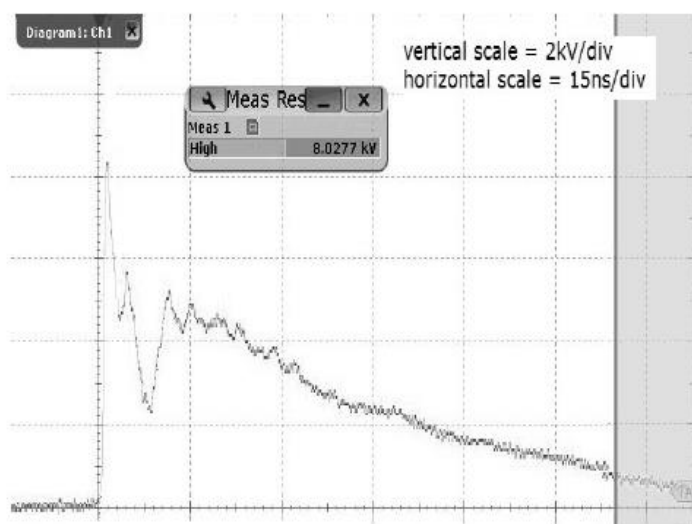
Rev. 1,26-Nov-2019



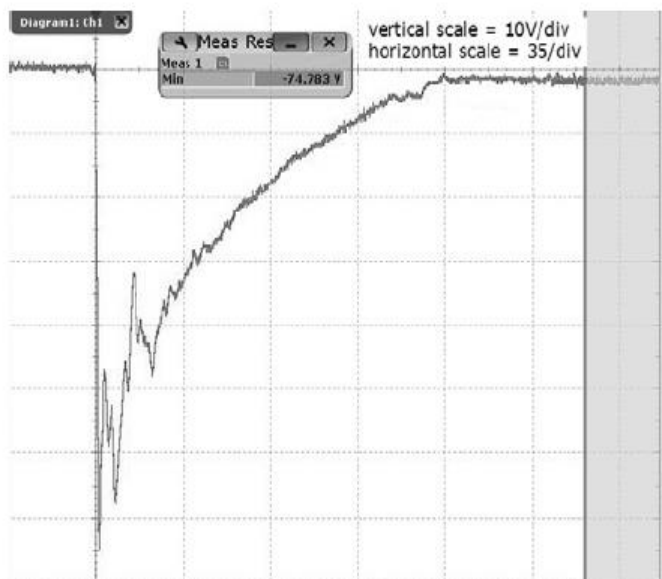
Unclamped -8 kV ESD pulse waveform
(IEC61000-4-2 network)



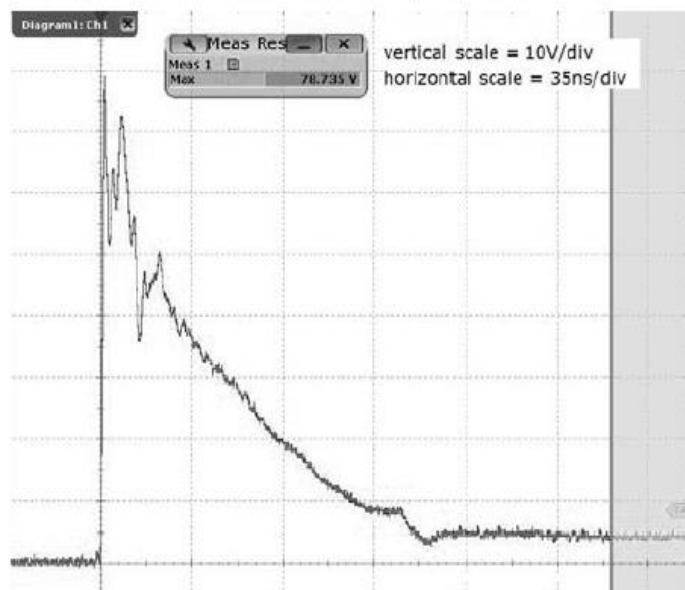
Unclamped +8 kV ESD pulse waveform
(IEC61000-4-2 network)



Clamped -8 kV ESD pulse waveform
(IEC61000-4-2 network)



Clamped +8 kV ESD pulse waveform
(IEC61000-4-2 network)



The curve above is for reference only.

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