



DWGU0715D5-Q ESD Protection Diode

Feature

- Uni-directional ESD protection of one line
- 5000Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 7V
- Junction Capacitance: 600pF(Typ)
- Low clamping voltage
- Low leakage current
- AEC-Q101 qualified
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-5 (Lightning) 250A (8/20 μs)

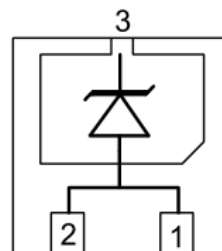
Application

- Power Management
- Industrial Application
- Power Supply Protection
- Many other portable devices

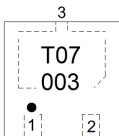
Mechanical Data

- Package: DFN2020-3L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
DWGU0715D5-Q	DFN2020-3L		3000 Tape & Reel	7 inches



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

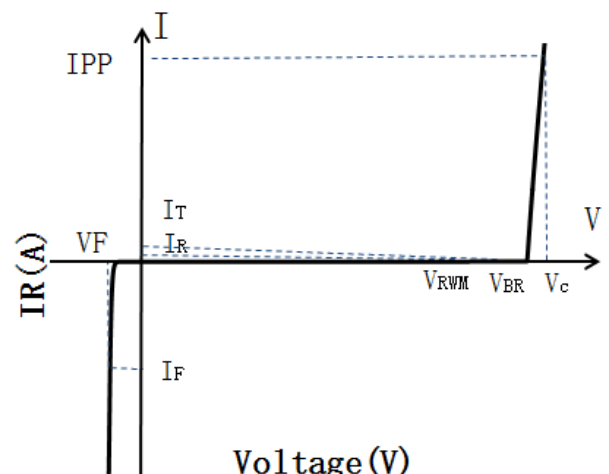
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{PK}	5000	W
Peak Pulse Current (8/20 μs)	I_{PP}	250	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	± 30 ± 30	kV
Operating Temperature Range	T_J	-55 to $+125$	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to $+150$	$^{\circ}\text{C}$

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}				7	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	8	9		V
Reverse Leakage Current	I_R	$V_{RWM} = 7\text{V}$			1.0	μA
Clamping Voltage	V_C	$I_{PP} = 100\text{A}$ (8 x 20 μs pulse)		12	16	V
Clamping Voltage	V_C	$I_{PP} = 250\text{A}$ (8 x 20 μs pulse)		16	20	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$		600		pF

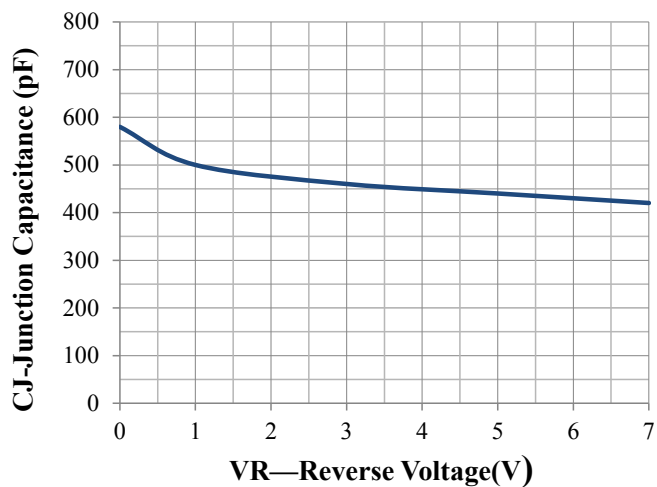
Electrical Parameters

Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_C

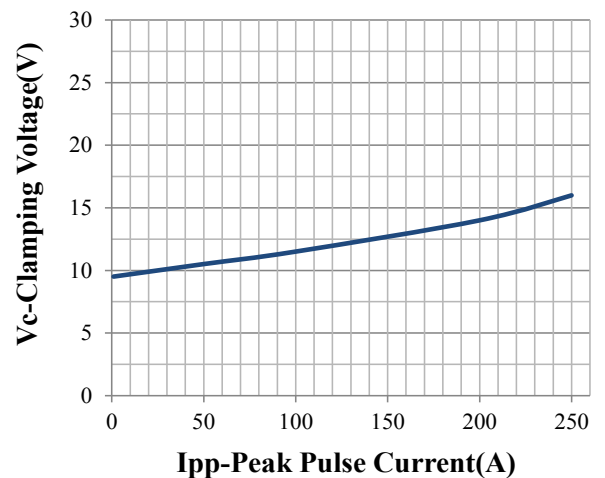




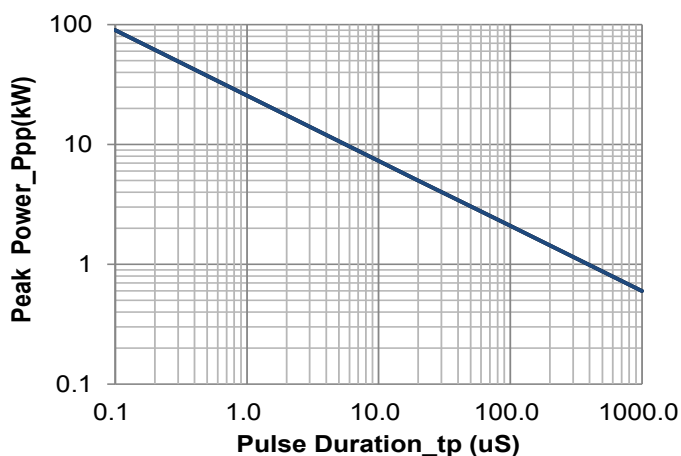
Typical Characteristics



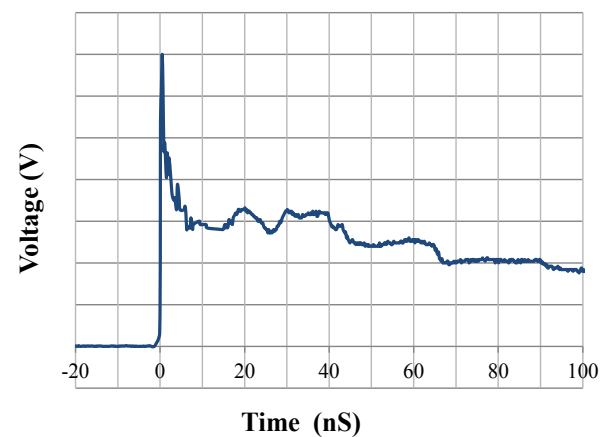
Junction Capacitance vs. Reverse Voltage



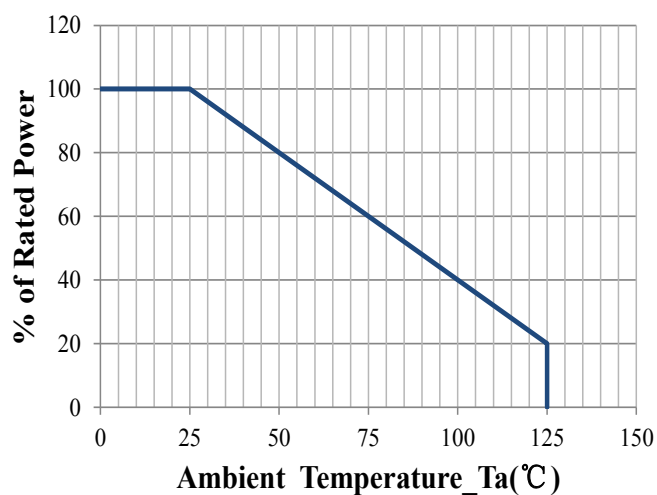
Clamping Voltage vs. Peak Pulse Current



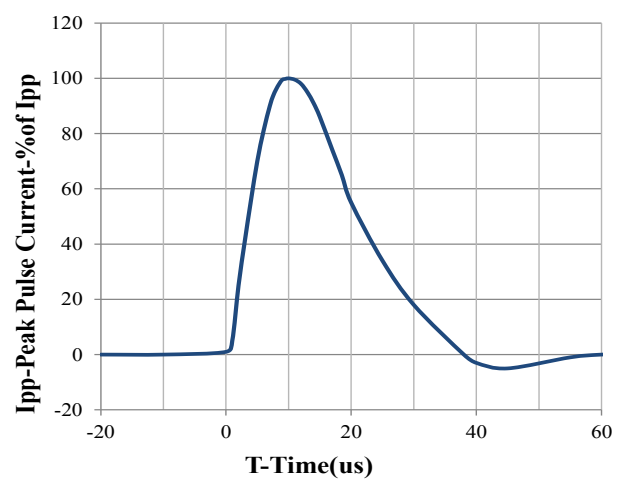
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



Power Derating Curve



8 X 20us Pulse Waveform



DFN2020-3L Outline Drawing

