

**Transient Voltage Suppressor**

**FEATURES**

- ◆ 2900Watts peak pulse power ( $t_p = 8/20\mu s$ )
- ◆ Solid-state silicon-avalanche technology
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ Protection one data/power line
- ◆ IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air
- ◆ IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ IEC 61000-4-5 (Lightning)80A (8/20 $\mu s$ )

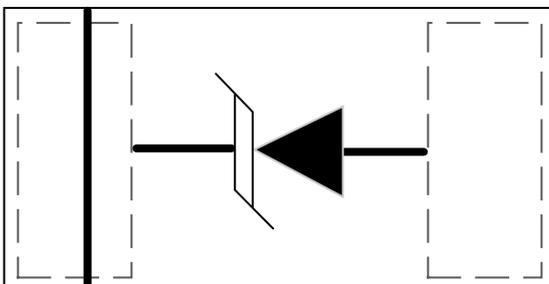
**APPLICATIONS**

- ◆ Cell Phone Handsets and Accessories
- ◆ Microprocessor based equipment
- ◆ Personal Digital Assistants (PDA's)
- ◆ Notebooks, Desktops, and Servers
- ◆ Portable Instrumentation

**MECHANICAL DATA**

- ◆ Case: DFN1006-2L
- ◆ Molding compound flammability rating: UL 94V-0
- ◆ Packaging: Tape and Reel
- ◆ RoHS/WEEE Compliant

**Schematic & PIN Configuration**



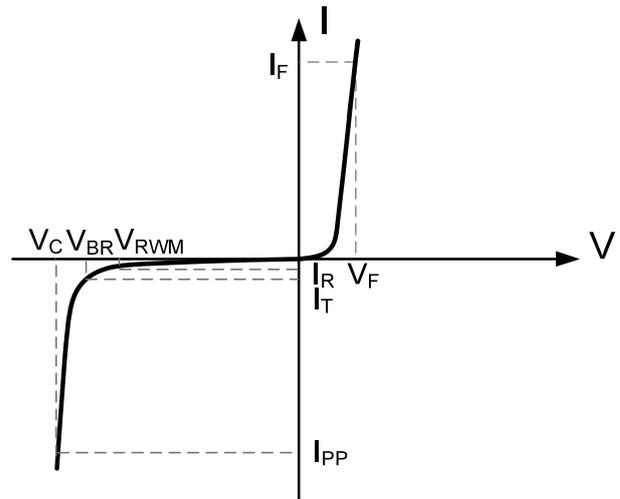
<b>Marking Code</b>	
ESD1610D30	HH*

**Absolute Maximum Rating**

Characteristics	Symbols	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	2900	W
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{PP}$	80	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	30 30	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to + 125	$^{\circ}C$

**Electrical Parameters (T=25°C)**

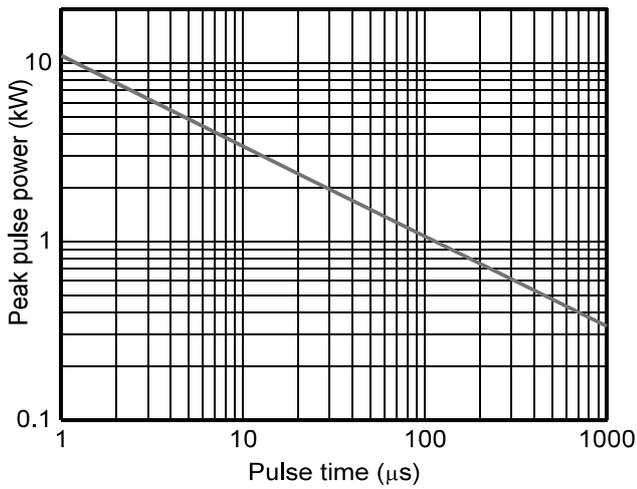
Symbol	Parameter
$I_{PP}$	Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Reverse Stand-Off Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



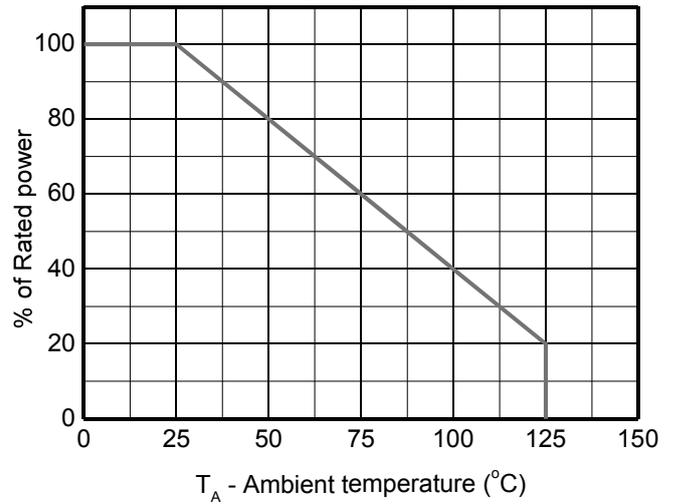
**Electrical Characteristics**

Characteristics	Test Condition	Symbols	Min	Typ	Max	Units
Reverse Stand-Off Voltage		$V_{RWM}$			30	V
Reverse Breakdown Voltage	$I_T=1mA$	$V_{BR}$	32			V
Reverse Leakage Current	$V_{RWM}=30V, T=25^\circ C$	$I_R$			0.5	$\mu A$
Peak Pulse Current	$t_p=8/20\mu s$	$I_{PP}$			80	A
Clamping Voltage	$I_{PP}=80A, t_p=8/20\mu s$	$V_C$			37	V
Junction Capacitance	$V_R=0V, f=1MHz$	$C_j$		180		pF

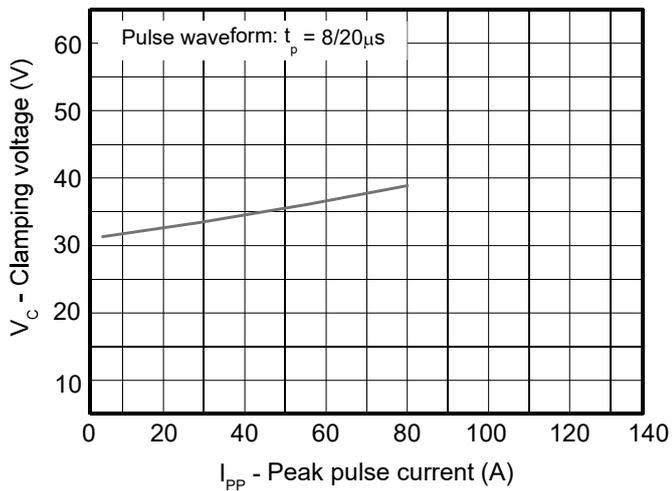
**Typical Characteristics**



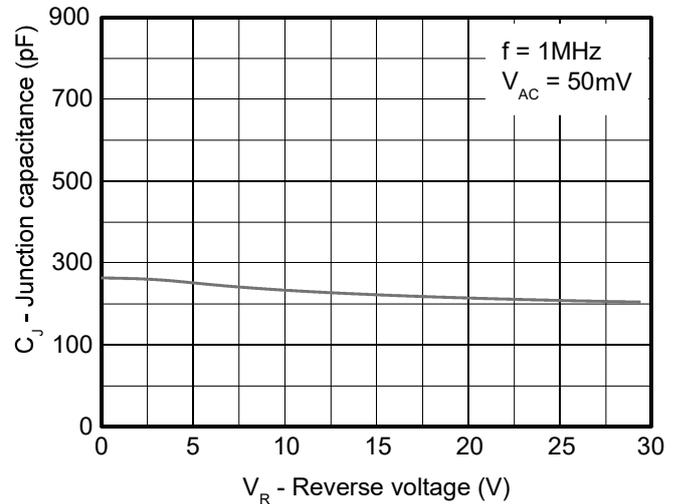
**Non-repetitive peak pulse power vs. Pulse time**



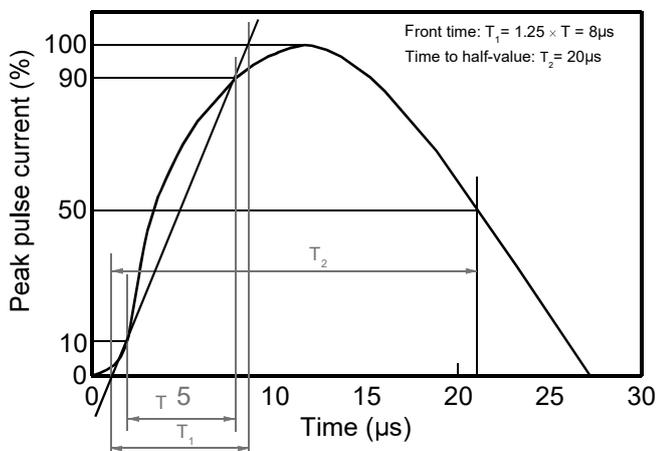
**Power derating vs. Ambient temperature**



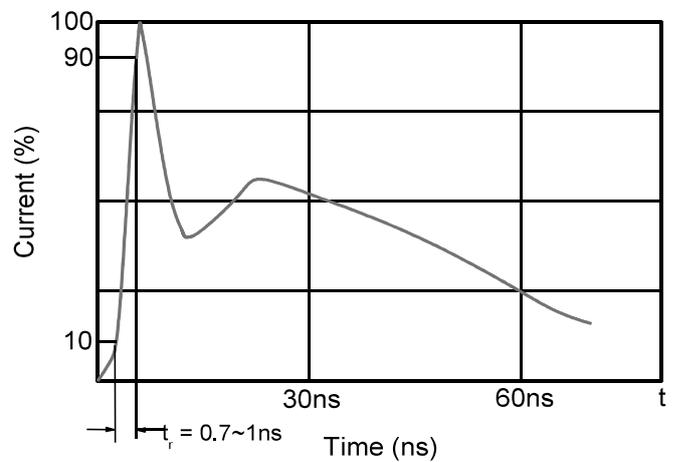
**Clamping voltage vs. Peak pulse current**



**Capacitance vs. Reverse voltage**



**8/20μs waveform per IEC61000-4-5**



**Contact discharge current waveform per IEC61000-4-2**

**Ordering information**

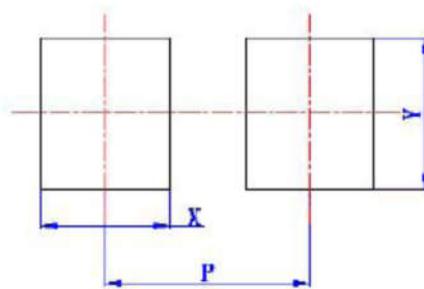
Package	Packing Description	Packing Quantity
DFN1610-2L	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

**Package Dimensions**

**DFN1610-2L**

Dim.	Millimeter(mm)		Inches	
	Min.	Max.	Min.	Max.
A	0.50	0.60	0.020	0.024
A1	-	0.05	-	0.002
D	1.50	1.70	0.060	0.067
E	0.90	1.10	0.035	0.043
e	Typ1.05		Typ0.041	
b	0.35	0.45	0.014	0.018
L	0.75	0.95	0.030	0.037

**The recommended mounting pad size**



Dim.	Millimeter(mm)
	TYP
X	0.62
Y	1.00
P	1.20

## Disclaimer

The information presented in this document is for reference only. GuangDong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.