



RSG5D6H8

Transient Voltage Suppressors ESD Protection Diodes with Ultra-Low Capacitance

Applications

- Mobile phone
- PAD
- Notebook
- STB
- LCD TV
- Digital camera
- Other electronic equipment



Features

- Small Body Outline Dimensions
- Low Body Height
- Peak Power up to 80 Watts @ 8 x 20 μ s Pulse
- Low Leakage current
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



Absolute Ratings ($T_{amb}=25^{\circ}C$)

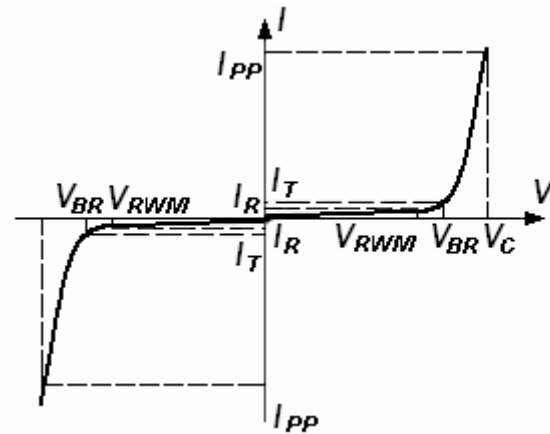
Symbol	Parameter	Value	Units	
P_{PP}	Peak Pulse Power ($t_p = 8/20 \mu s$)	80	W	
T_L	Maximum lead temperature for soldering during 10s	260	$^{\circ}C$	
T_{stg}	Storage Temperature Range	-55 to +155	$^{\circ}C$	
T_{op}	Operating Temperature Range	-40 to +125	$^{\circ}C$	
T_j	Maximum junction temperature	150	$^{\circ}C$	
	IEC61000-4-2 (ESD)	air discharge contact discharge	± 15 ± 8	KV
	IEC61000-4-4 (EFT)		40	A
	ESD Voltage	Per Human Body Model	16	KV



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Electrical Parameter

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



Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. VF = 0.9V at IF = 10mA

V_{RWM} (V)	I_{R1} (μ A) @ V_{RWM}	I_{R2} (μ A) @ $V_R=3.5V$	V_{BR} (V) @ I_T (Note 1)	I_T	V_C (V) @ $I_{PP}=5 A^*$	V_C (V) @ Max I_{PP}^*	I_{PP} (A)*	P_{PK} (W)*	C (pF)
Max	Max	Max	Min	mA	Typ	Max	Max	Max	Typ
5.0	0.5	0.3	5.6	1.0	11.6	18.6	9.4	174	3

*Surge current waveform per Figure 1.

- V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C.

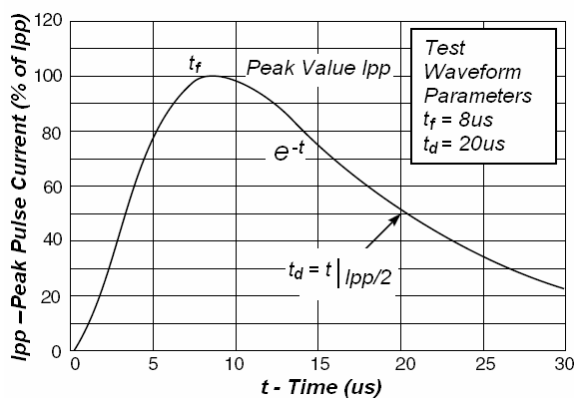


Fig1. Pulse Waveform

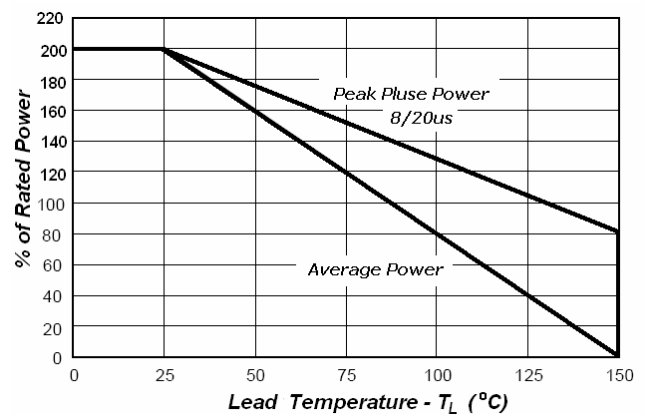
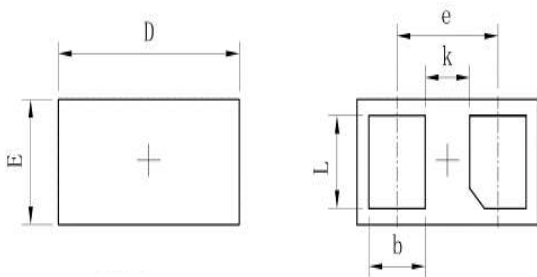


Fig2. Power Derating Curve

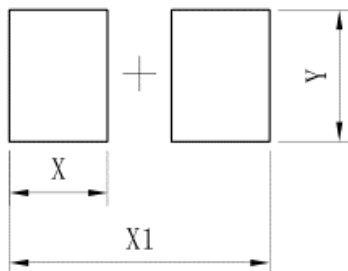
DFN0603

OUTLINE AND DIMENSIONS



DFN0603			
Dim	Min	Typ.	Max
D	0.58	0.61	0.64
E	0.28	0.31	0.34
e	-	0.34	-
L	0.20	0.23	0.26
b	0.16	0.19	0.22
A	0.25	0.28	0.31
k	0.12	0.15	0.18
All Dimensions in mm			

SOLDERING FOOTPRINT



DFN0603	
DIM	(mm)
X	0.23
X1	0.61
Y	0.30