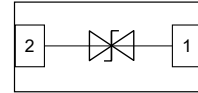


## ESD Protection Diode in DFN0603

### Features

- 95Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Tiny DFN0603 package
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Response time is typically  $< 1ns$
- Medium capacitance ( $C_j = 15pF$  typ.)
- Protection one data/power line to:
  - IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air
  - IEC 61000-4-4 (EFT) 40A (5/50ns)
  - IEC 61000-4-5 (Lightning) 8A (8/20 $\mu s$ )



### Mechanical Data

- **Case:** DFN0603 (plastic package).  
Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Applications

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

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

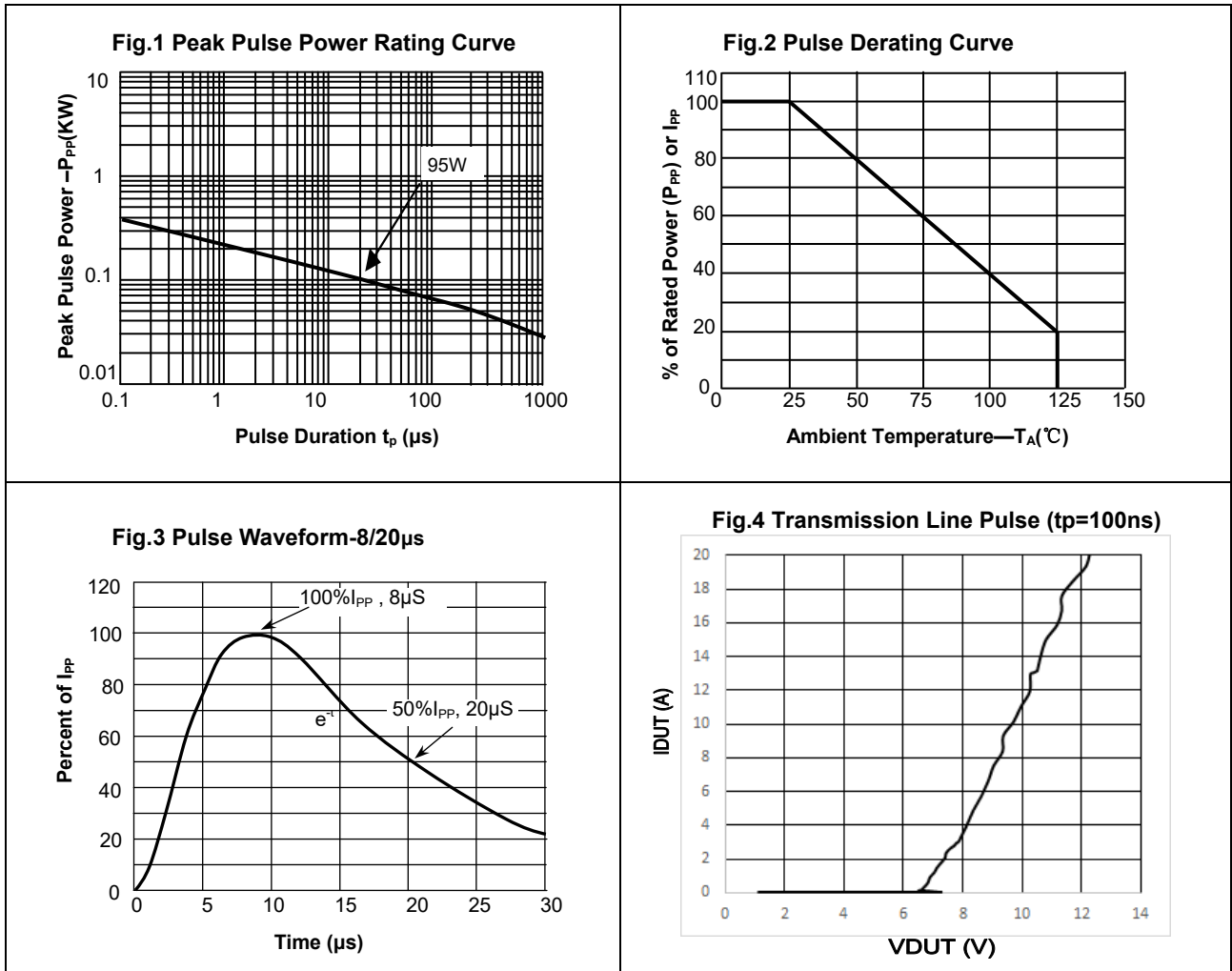
Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_P = 8/20\mu S$ )	$P_{PP}$	95	W
ESD contact/air discharge (IEC-61000-4-2)	$V_{ESD}$	30/30	kV
Peak Pulse Current ( $t_P = 8/20\mu S$ )	$I_{PP}$	6	A
Junction Temperature	$T_J$	-55 to +125	°C
Storage temperature	$T_{STG}$	-55 to +150	°C
Maximum Lead Solder Temperature(10 second duration)	$T_L$	260	°C

### Electrical Characteristics

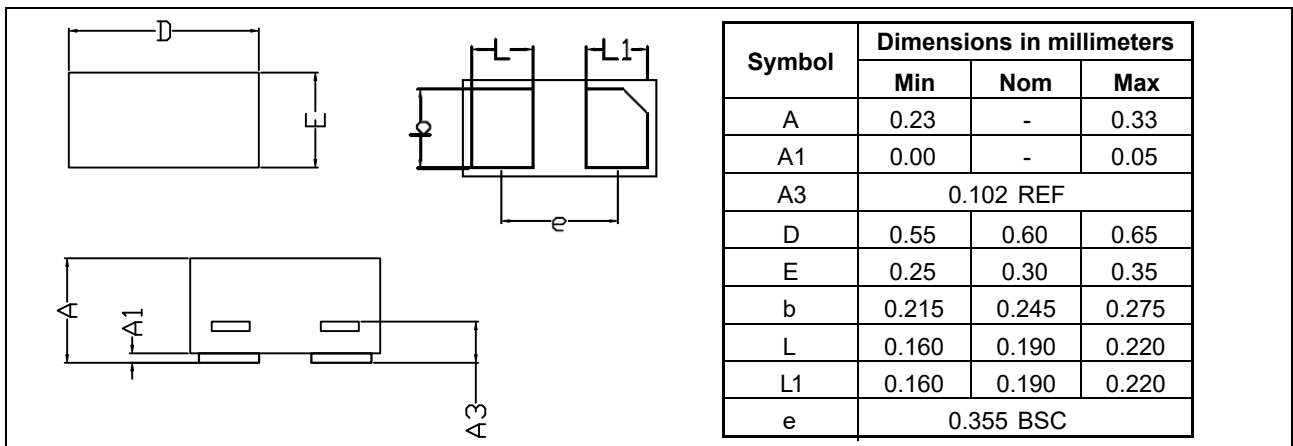
( $T_A = 25\text{ °C}$  unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	5.8			V
Reverse Leakage Current	$I_R$	$V_R = 5V$			1	$\mu A$
Clamping Voltage(SURGE)	$V_C$	$I_{PP} = 8A, T_P = 8/20\mu S$			12	V
Clamping Voltage(ESD)	$V_C$	$V_{ESD} = +6kV$		8.5		V
Clamping Voltage(TLP)	$V_C$	$I_{PP} = 8A, T_P = 100nS$		9		V
Clamping Voltage(TLP)	$V_C$	$I_{PP} = 16A, T_P = 100nS$		11		V
Dynamic Resistance	$R_{dyn}$			0.295		$\Omega$
Junction Capacitance	$C_J$	$V_R = 0V, f = 1MHz$		15		pF

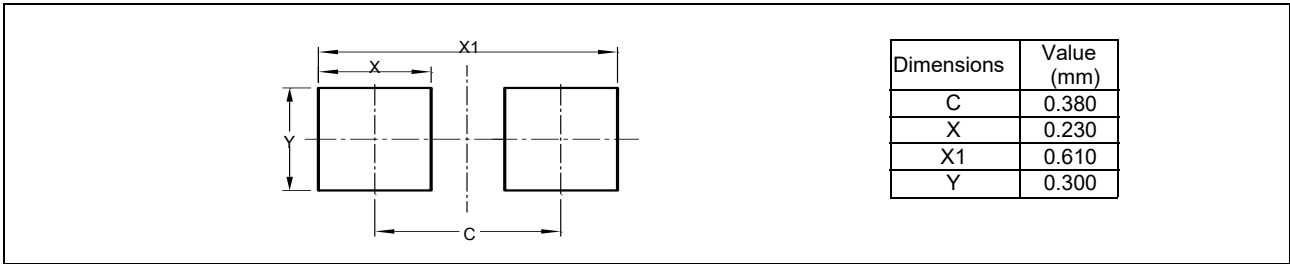
## Typical Characteristics (T<sub>amb</sub> = 25 °C unless otherwise specified)



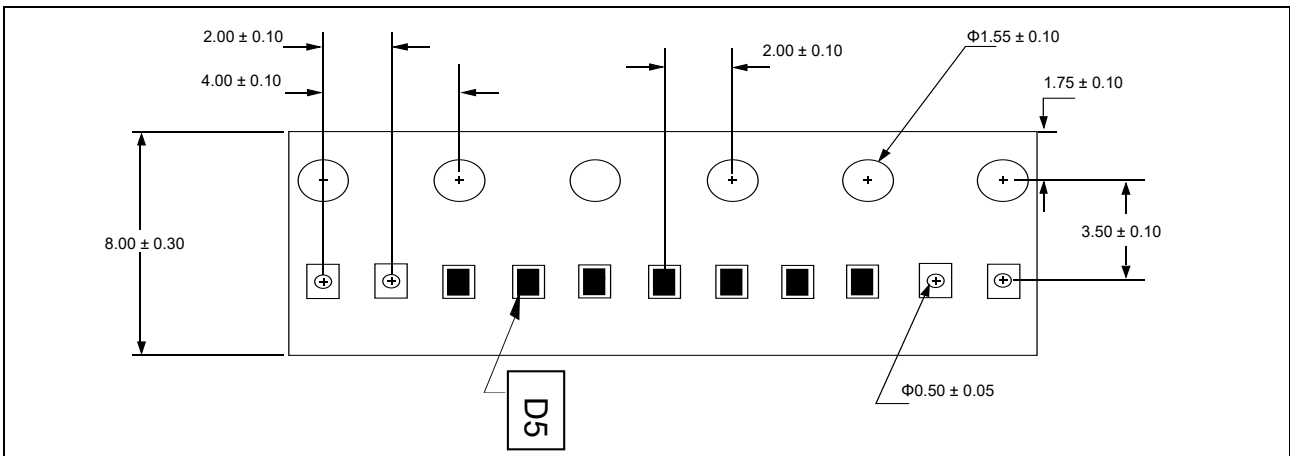
## Package Dimensions



## Pad Dimensions



## Package Information



## Marking



## Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
TESD0603NC5VB-M	DFN0603	Tape and reel	10000pcs / reel	EIA STD RS-481