

## Unidirectional ESD Protection Diode

Primary characteristics			
Parameter	Symbol	Value	Unit
ESD contact discharge (IEC 61000-4-2)	$V_{ESD}$	$\pm 30$	kV
ESD air discharge (IEC 61000-4-2)	$V_{ESD}$	$\pm 30$	kV
Peak pulse power ( $T_p=8/20\mu s$ )	$P_{PP}$	360	W

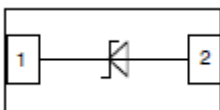
### Features

- 360W peak pulse power ( $T_p = 8/20\mu s$ ),
- Uni-directional configurations,
- Low clamping voltage,
- Low leakage current,
- Nominal capacitance ( $C_j=25pF$  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) 7A (8/20 $\mu s$ )

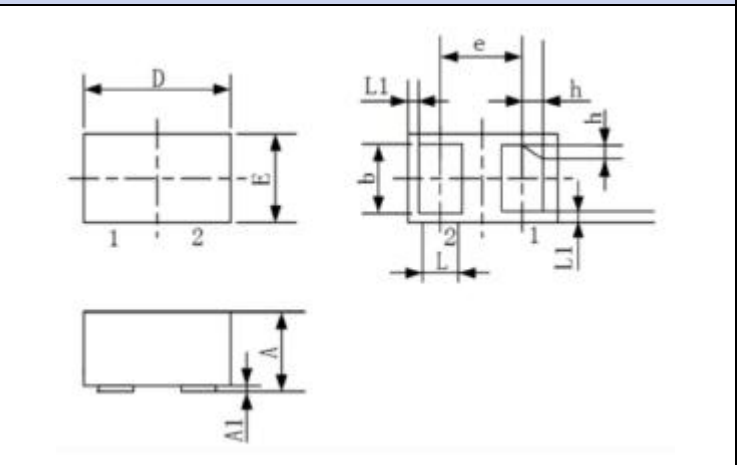
### Applications

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

### Pin configuration



### Case dimensions



#### DFN 1006

Unit	D	E	b	L	e	A	A1	h	L1
Mm	0.95	0.55	0.45	0.20	0.65 BSC	0.40	0.00	0.07	0.05 REF
	1.00	0.60	0.50	0.25		0.50	0.02	0.12	
	1.05	0.65	0.55	0.30		0.55	0.05	0.17	

### Mechanical Data

- **Case:** DFN1006 (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

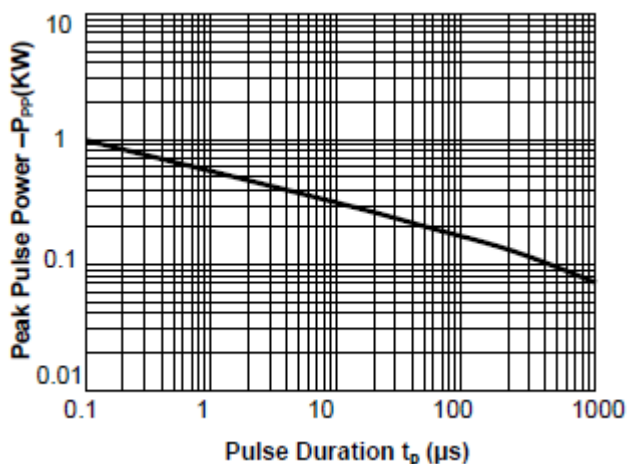
### Absolute maximum ratings and electrical characteristics ( $T_a = 25^\circ C$ )

Characteristics	Test condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
ESD discharge (IEC 61000-4-2)	Contact	$V_{ESD}$	-30	-	30	kV
ESD discharge (IEC 61000-4-2)	Air		-30	-	30	
Peak pulse power	$T_p=8/20\mu s$	$P_{PP}$	-	-	360	W
Peak pulse current	$T_p=8/20\mu s$	$I_{PP}$	-	-	7	A
Junction temperature	-	$T_j$	-55	-	125	°C
Storage temperature	-	$T_{STG}$	-55	-	150	°C

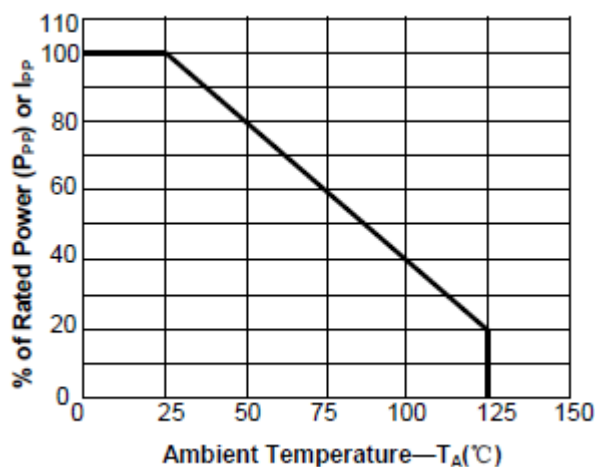
Reverse stand-off voltage	-	$V_{RWM}$	-	-	24	V
Reverse breakdown voltage	$I_T=1mA$	$V_{BR}$	26.7	-	-	V
Reverse leakage current	$V_{RWM}=24V$	$I_R$	-	-	0.5	$\mu A$
Clamping Voltage (IEC 61000-4-5)	$I_{PP}=7A, T_p=8/20\mu s$	$V_C$	-	46	52	V
Junction capacitance	$V_R=0V, f=1MHz$	$C_J$	-	25	-	pF

### Typical characteristics

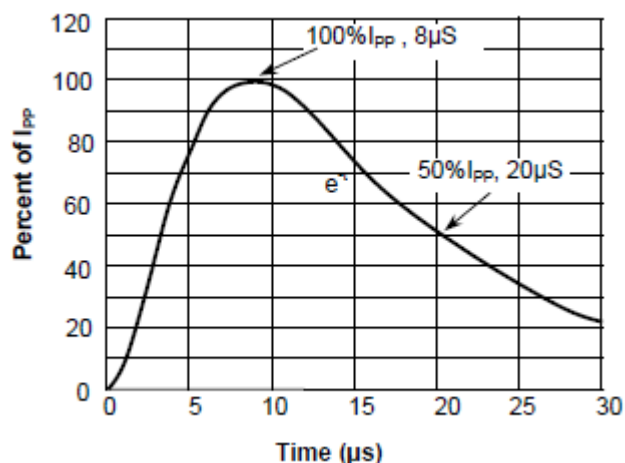
#### Peak pulse power rating curve



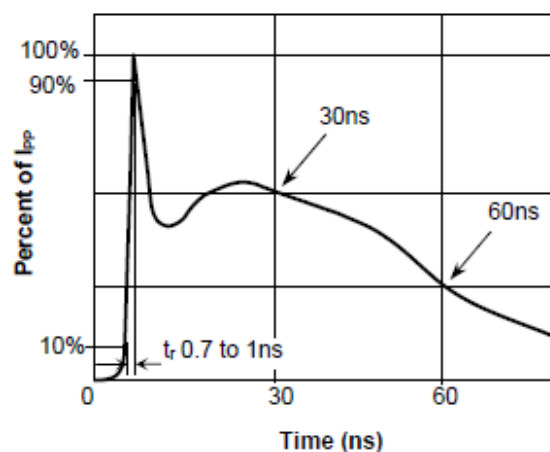
#### Pulse derating curve

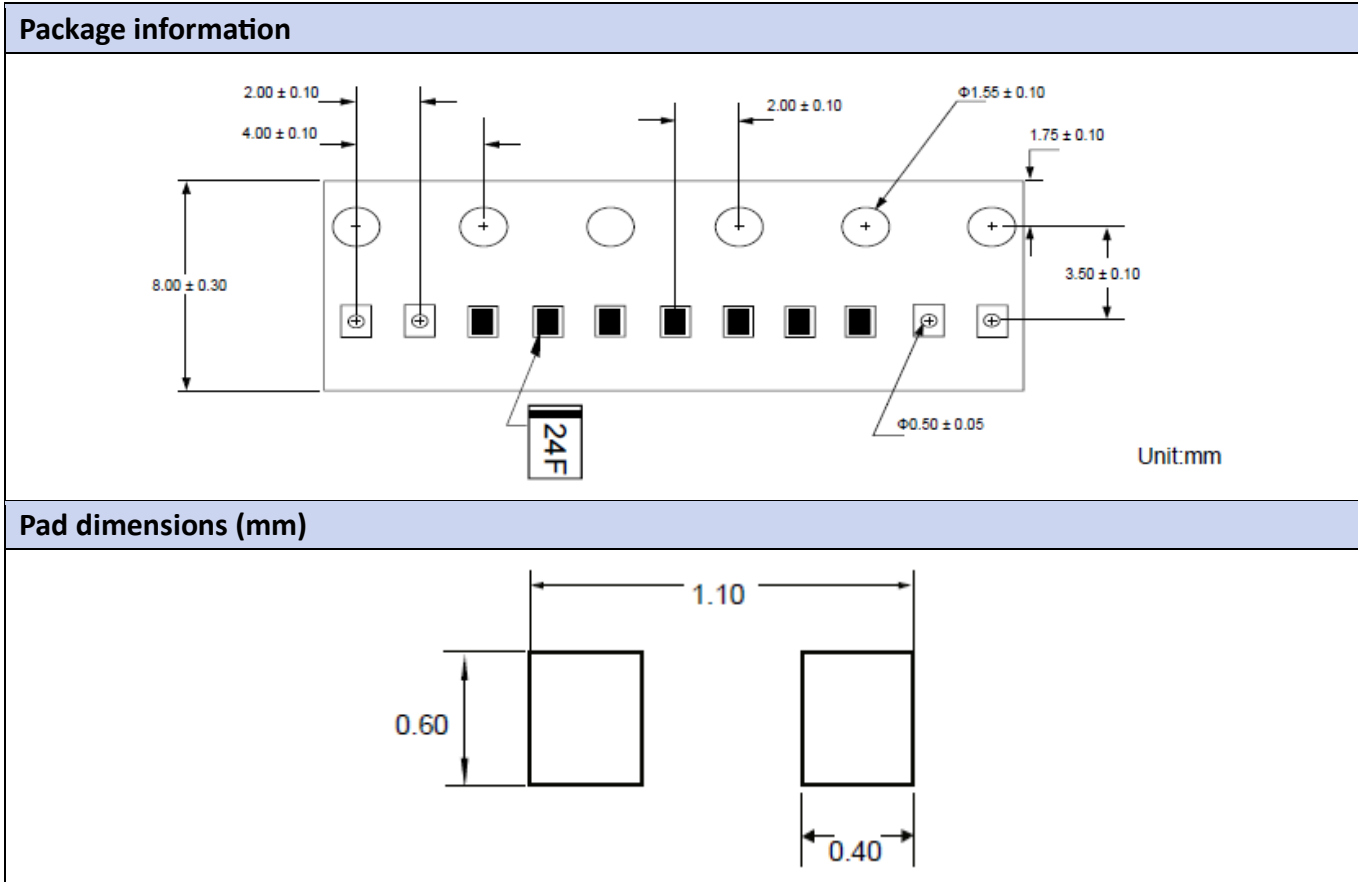


#### Pulse waveform - 8/20 $\mu s$



#### Pulse waveform - ESD





Ordering information				
Part Number	Package	Packaging option	Base quantity	Packaging specification
ESD1006NC24VU	DFN1006	Tape and reel	10000pcs/reel	EIA STD RS-481

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