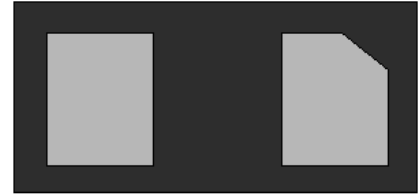




### FEATURES:

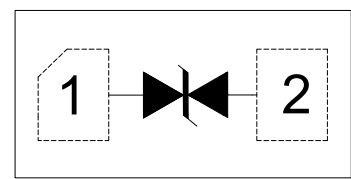
- ✧ Small body outline dimensions: 0.6mm×0.3mm
- ✧ Low clamping voltage
- ✧ Low operating voltage: 5.0V
- ✧ Low capacitance
- ✧ RoHS compliant



DFN0603-2L(Bottom view)

### MAIN APPLICATIONS

- ✧ Cell phone handsets and accessories
- ✧ Personal digital assistants (PDA's)
- ✧ Notebooks, desktops, and servers
- ✧ Portable instrumentation
- ✧ Communication systems
- ✧ Microprocessor based equipment



Pin Configuration(Top view)

### PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) ±20kV (air), ±20kV (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5(Lightning) 4.5A (8/20μs)

### MECHANICAL CHARACTERISTICS

- ✧ DFN0603-2L package
- ✧ Molding compound flammability rating : UL 94V-0
- ✧ Quantity per reel: 10,000pcs
- ✧ Lead finish: lead free
- ✧ Marking code: D/M

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, RH=45%-75%, unless otherwise noted)

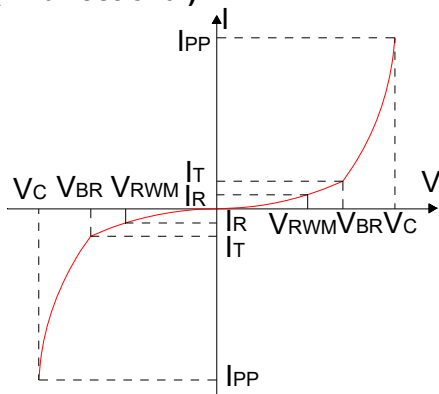
Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 μs waveform	P <sub>PP</sub>	100	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	+/- 20	kV
ESD per IEC 61000-4-2 (Contact)		+/- 20	
Lead soldering temperature	T <sub>L</sub>	260 (10 sec.)	°C
Operating junction temperature range	T <sub>J</sub>	-55 to +125	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$ )

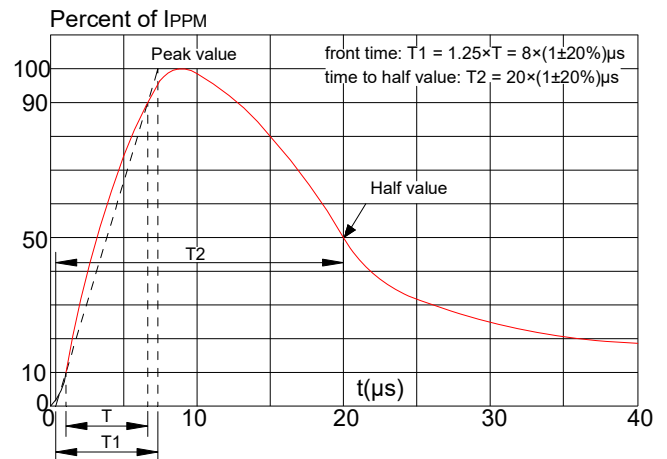
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	$V_{RWM}$				5.0	V
Reverse breakdown voltage	$V_{BR}$	$I_T=1\text{mA}$	6.0		10.0	V
Reverse leakage current	$I_R$	$V_{RWM}=5\text{V}$			1	$\mu\text{A}$
Peak pulse current	$I_{PP}$	$t_p=8/20\mu\text{s}$			4.5	A
Clamping voltage	$V_C$	$I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$		12	15	V
		$I_{PP}=4.5\text{A}, t_p=8/20\mu\text{s}$		20	23	V
Junction capacitance	$C_J$	$V_{RWM}=0\text{V}, f=1\text{MHz}$		0.4	0.6	pF

**RATINGS AND V-I CHARACTERISTICS CURVES** ( $T_A=25^{\circ}\text{C}$ , unless otherwise noted)

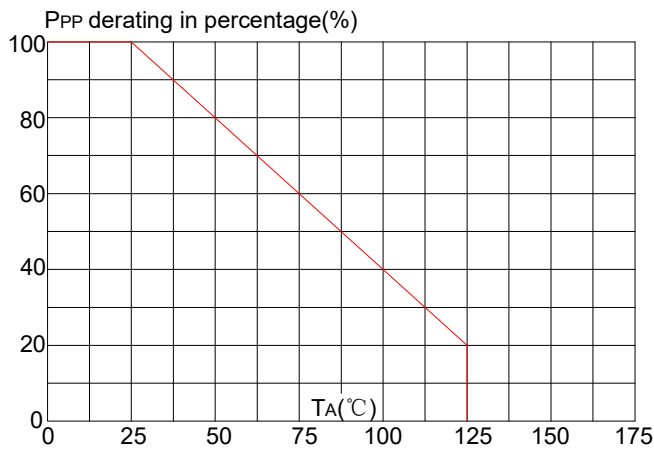
**FIG.1: V- I curve characteristics (Bi-directional)**



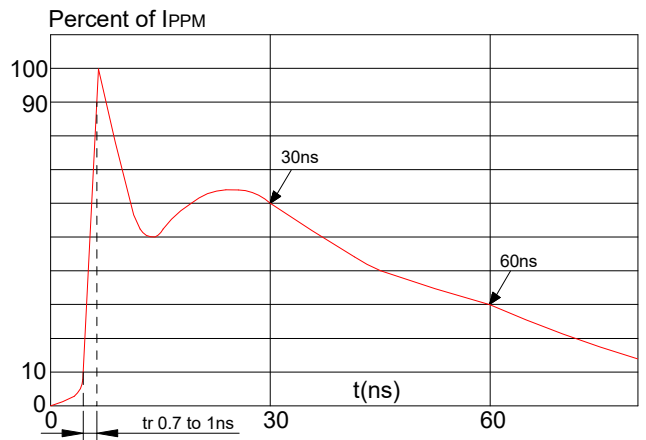
**FIG.2: Pulse waveform (8/20 $\mu\text{s}$ )**



**FIG.3: Pulse derating curve**

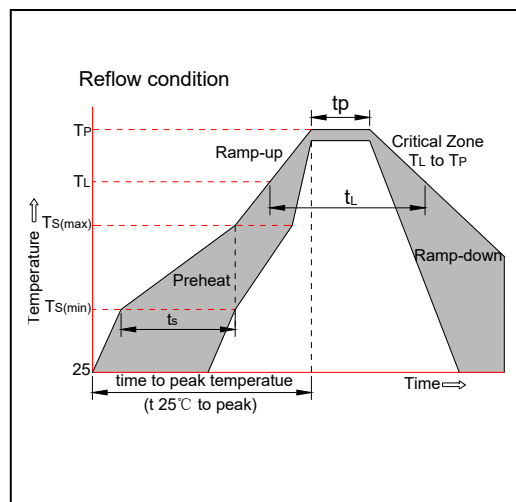


**FIG.4: ESD clamping (20kV contact)**

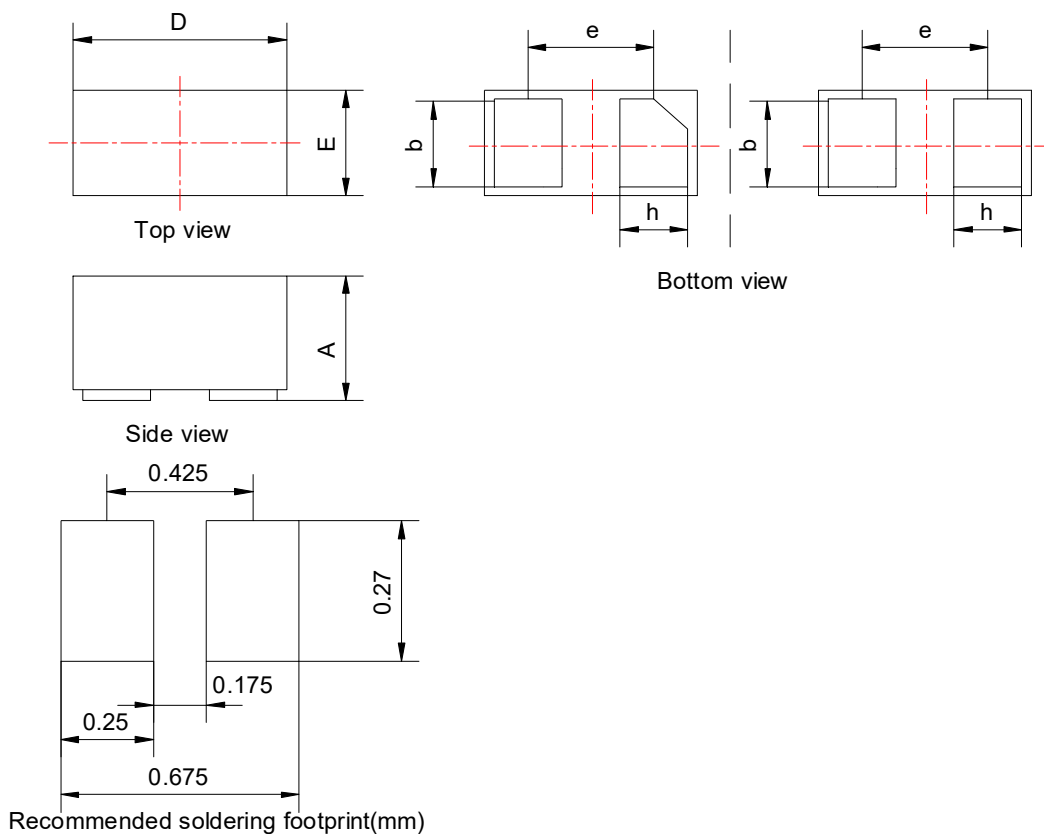


**SOLDERING PARAMETERS**

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) ( $t_s$ )	60-180 secs.
Average ramp up rate (Liquidus Temp ( $T_L$ )to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquidus)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_P$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C

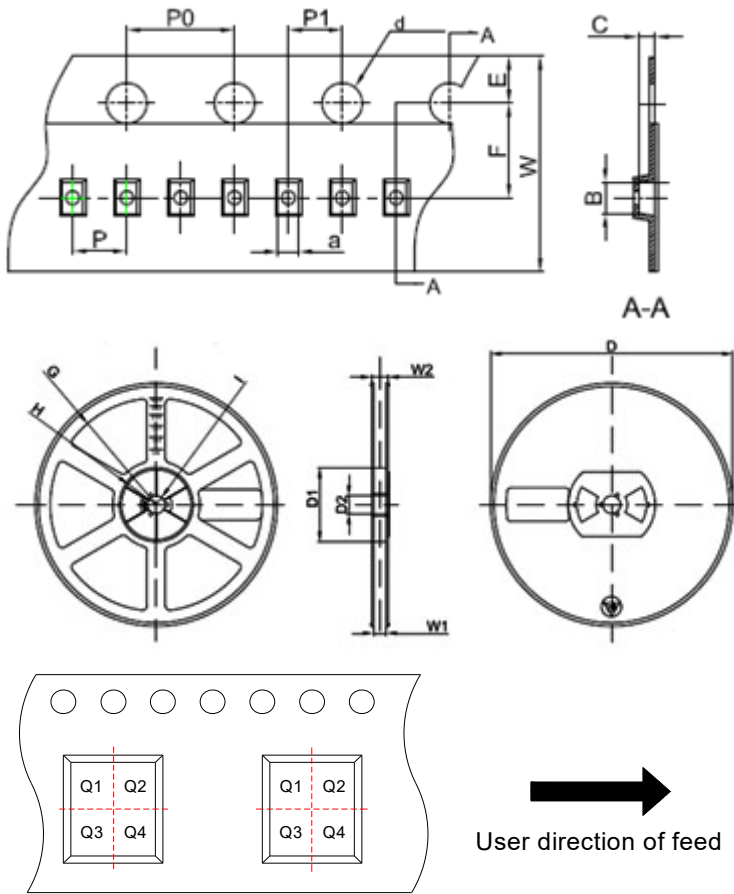


**PACKAGE MECHANICAL DATA**



Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.25	0.30	0.34	0.010	0.012	0.013
D	0.55	0.60	0.65	0.022	0.024	0.026
E	0.25	0.30	0.35	0.010	0.012	0.014
b	0.2	0.23	0.3	0.008	0.009	0.012
e	0.4			0.016		
h	0.13	0.17	0.24	0.005	0.007	0.009

**TAPE AND REEL INFORMATION-DFN0603-2L**



Pin 1 quadrant:Q1&Q2

**Packaging Description:**

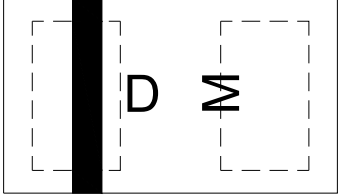
DFN0603-2L parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 10,000units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated).

Symbol	Millimeters	Inches
	Typ.	Typ.
a	0.41	0.016
B	0.70	0.028
C	0.38	0.015
d	Φ1.50	Φ0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	2.00	0.079
P1	2.00	0.079
W	8.00	0.315
D	Φ178	Φ7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484

**ORDERING INFORMATION**

PART No.	PACKAGE TYPE	QUANTITY(PCS) REEL	DESCRIPTION
JEB05UCDS-A	DFN0603-2L	10,000	7 inch reel pack

**MARKING CODE**

Part Number	Marking Code
JEB05UCDS-A	<p style="text-align: center;">Top view</p>  <p>D = Specific Device Code M = Month Code</p>

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