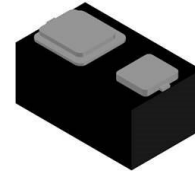
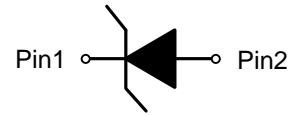


Features

- Working voltage : 7V
- Peak power (tp=8/20μs) : 142W
- ESD protection
IEC61000-4-2 (Contact) : ±30kV
IEC61000-4-2 (Air) : ±30kV
- Low leakage current
- Small package



FBP-02C



Pin configuration (Top view)

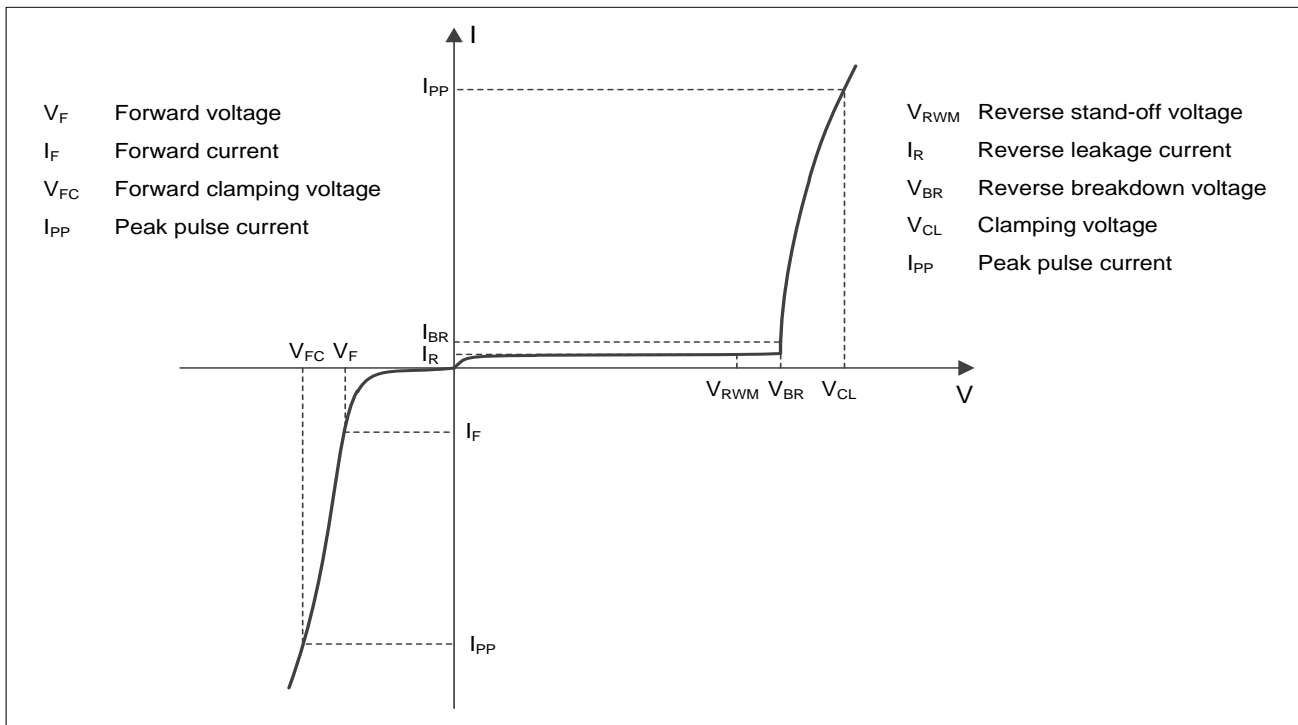
Applications

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

Absolute maximum ratings

Parameter	Symbol	Rating	Unit
Peak pulse power ($t_p = 8/20\mu s$)	Ppk	142	W
Peak pulse current ($t_p = 8/20\mu s$)	Ipp	9.5	A
ESD according to IEC61000-4-2 air discharge	V _{ESD}	±30	kV
ESD according to IEC61000-4-2 contact discharge		±30	
Junction temperature	T _J	125	°C
Operating temperature	T _{OP}	-40~85	°C
Lead temperature	T _L	260	°C
Storage temperature	T _{STG}	-55~150	°C

Electronics characteristics (Ta=25 °C, unless otherwise noted)

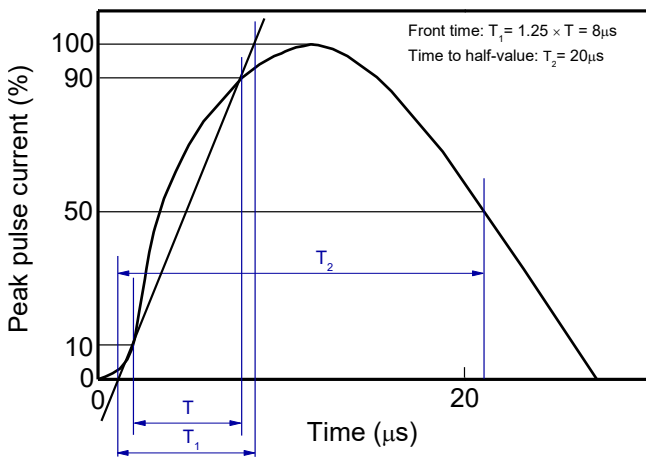


Electrical characteristics ($T_A = 25\text{ }^\circ\text{C}$, unless otherwise noted)

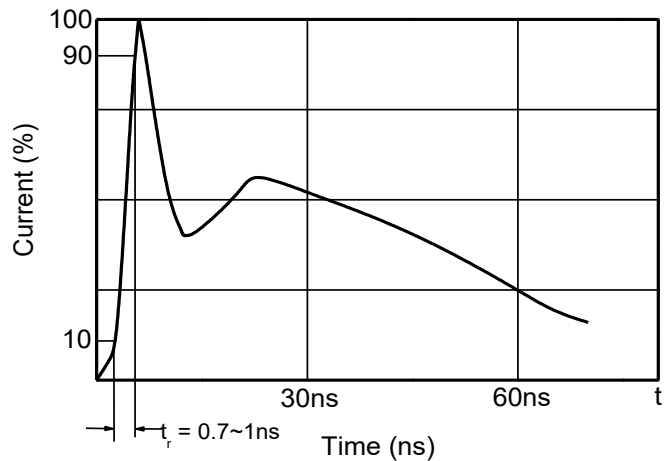
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V_{RWM}				7	V
Reverse leakage current	I_R	$V_{RWM}=7V$			100	nA
Reverse breakdown voltage	V_{BR}	$I_T=1mA$	8.0	8.5	10.0	V
Forward voltage	V_F	$I_F=10mA$	0.55	0.9	1.25	V
Clamping voltage ¹⁾	V_{CL}	$I_{PP} = 16A, t_p = 100ns$		12		
Dynamic resistance ¹⁾	R_{DYN}	$t_p = 100ns$		0.24		Ω
Clamping voltage ²⁾	V_{CL}	$V_{ESD} = 8kV$		12.5		V
Clamping voltage ³⁾	V_C	$I_{pp}=1A, t_p=8/20\mu s$			11	V
		$I_{pp}=9.5A, t_p=8/20\mu s$			15	V
Junction capacitance	C_J	$f=1MHz, V_R=0V$		49	65	pF

Notes:

- 1) TLP parameter: $Z_0 = 50\Omega, t_p = 100ns, t_r = 2ns$, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.
- 2) Contact discharge mode, according to IEC61000-4-2.
- 3) Non-repetitive current pulse, according to IEC61000-4-5.

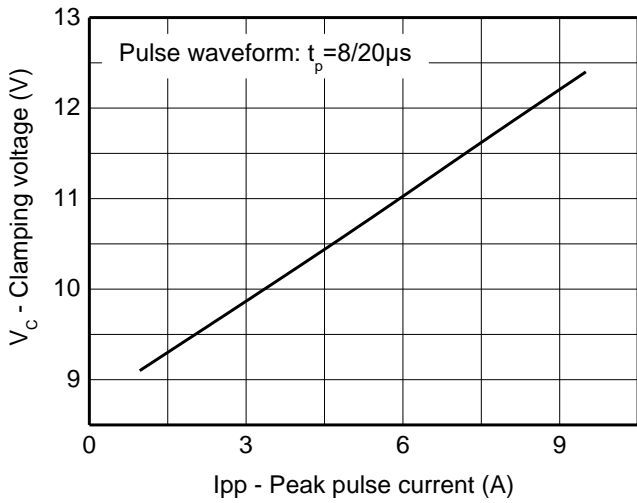


8/20µs waveform per IEC61000-4-5

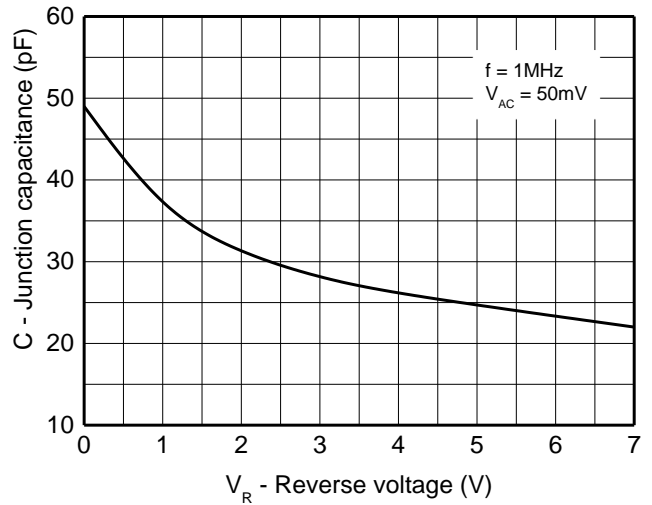


Contact discharge current waveform per IEC61000-4-2

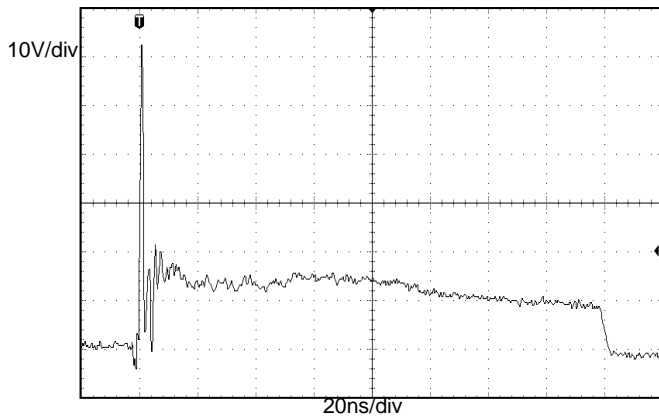
Typical characteristics (Ta=25°C, unless otherwise noted)



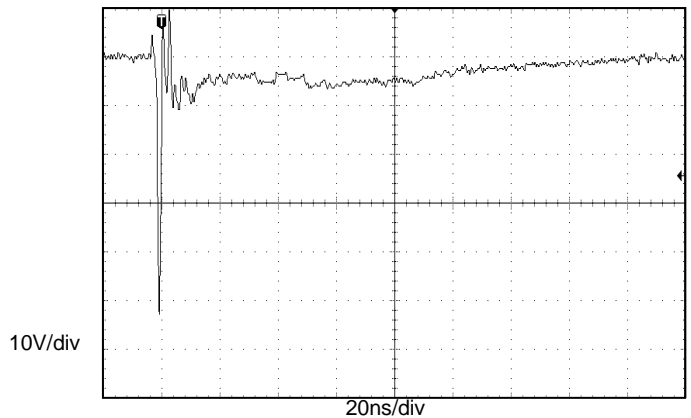
Clamping voltage vs. Peak pulse current



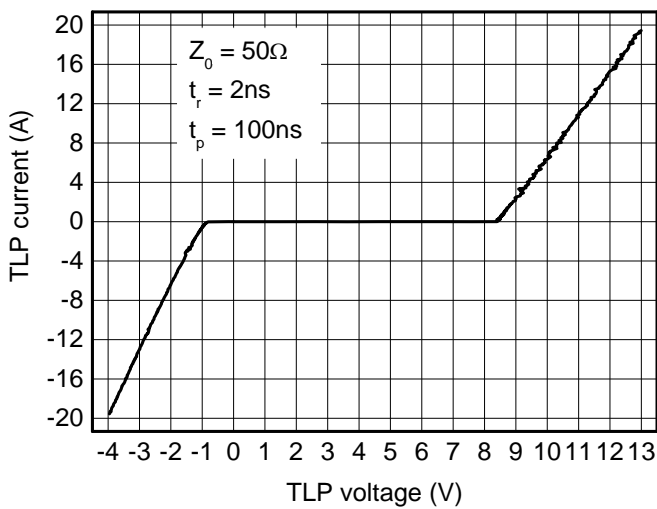
Capacitance vs. Reverse voltage



**ESD Clamping
(+8kV contact discharge per IEC61000-4-2)**

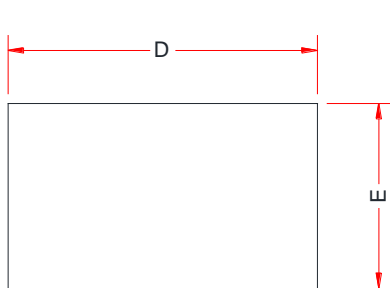


**ESD Clamping
(-8kV contact discharge per IEC61000-4-2)**

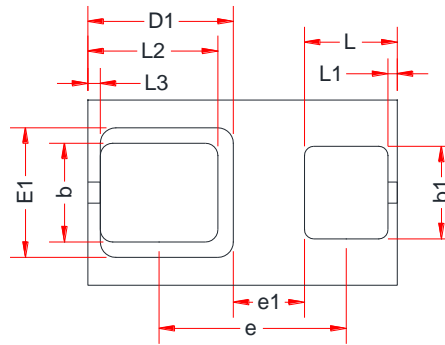


TLP Measurement

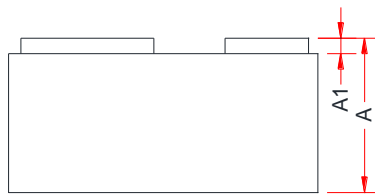
PACKAGE OUTLINE DIMENSIONS FBP-02C



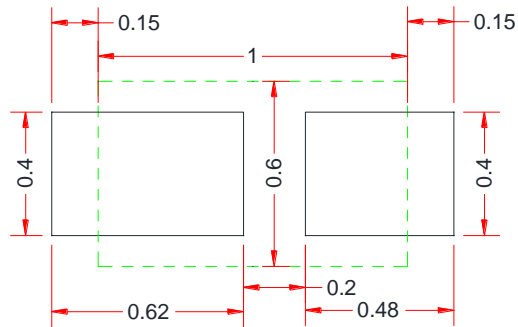
TOP VIEW



BOTTOM VIEW



SIDE VIEW



RECOMMENDED LAND PATTERN (Unit:mm)

Symbol	Dimensions in Millimeters		
	Min.	Typ.	Max.
A	0.45	0.50	0.55
A1	0.01	0.05	0.10
D	0.95	1.00	1.05
E	0.55	0.60	0.65
D1	0.47Ref		
E1	0.42Ref		
b	0.27	0.32	0.37
b1	0.25	0.30	0.35
e	0.55	0.60	0.66
e1	0.23Ref		
L	0.25	0.30	0.35
L1	0.03 Ref		
L2	0.37	0.42	0.47
L3	0.04 Ref		