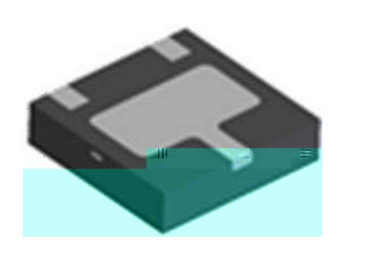
JEU12N3-CO TVS Diode array for ESD Protection

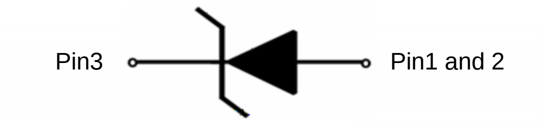
Rev.1.1

FEATURES

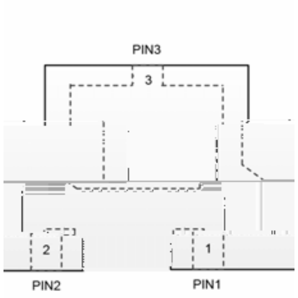


DFN2x2-3L

- 4500 Watts peak pulse power (t_P=8/20μs)
- Low leakage current
- Low clamping voltage
- Solid-state silicon-avalanche technology
- Cell phone handsets and accessories
- Portable electronics
- Peripherals



Circuit Diagram



Pin Configuration

PROTECTION SOLUTION TO MEET

- IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning) 180A (8/20μs)

MECHANICAL CHARACTERISTICS

- DFN2x2-3L package
- Molding compound flammability rating: UL 94V-0
- Quantity per reel: 3,000pcs
- Lead finish: lead free
- Marking code: T12

ABSOLUTE MAXIMUM RATINGS (T_A=25 Ņ , RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation at 8/20μs waveform	P_{PP}	4500	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	+/- 30 +/- 30	kV
Lead soldering temperature	T_L	260 (10 sec.)	
Operating junction temperature range	T_J	-55 to +125	
Storage temperature range	T_{STG}	-55 to +150	

ELECTRICAL CHARACTERISTICS (T_A=25 Ņ)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V_{RWM}				12	V
Reverse breakdown voltage	V_{BR}	I_T=1mA	13	14.5	16	V
Reverse leakage current	I_R	V_{RWM}=12V			1	μA
Clamping voltage	V_C	I_{PP}=50A, t_P=8/20μs			22	V
		I_{PP}=100A, t_P=8/20μs			25	V
		I_{PP}=180A, t_P=8/20μs			32	V
Junction capacitance	C_J	V_{RWM}=0V, f=1MHz	900	950	1200	pF

RATINGS AND V-I CHARACTERISTICS CURVES (T_A=25 , unless otherwise noted)

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

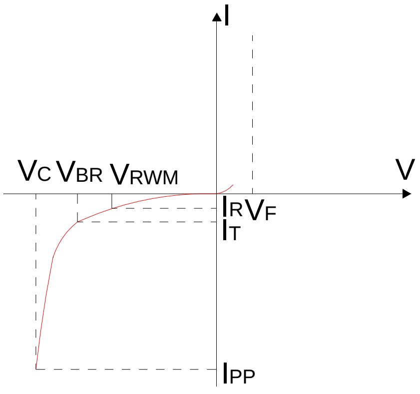


FIG.2: Pulse waveform (8/20μs)

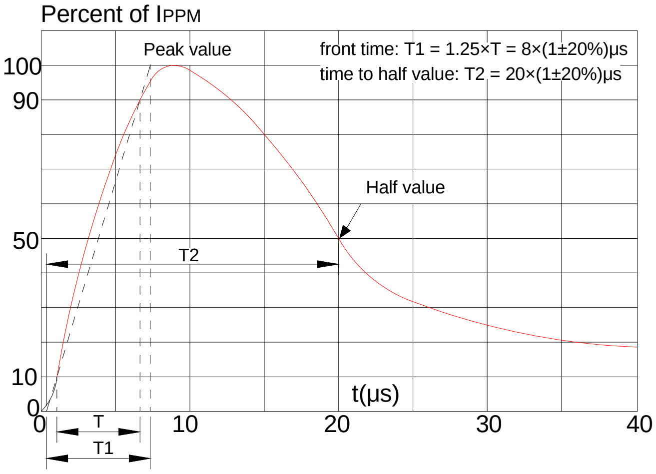


FIG.3: Pulse derating curve

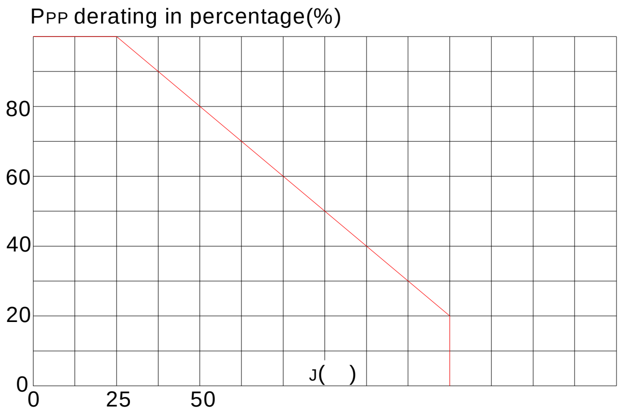


FIG.4: ESD clamping(30kV contact)

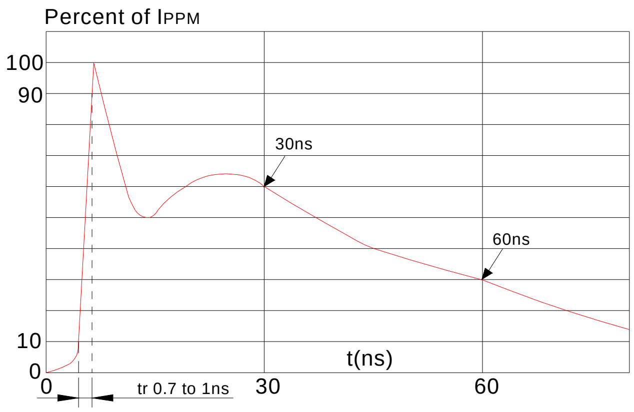


FIG.5:Clamping voltage vs.peak pulse current

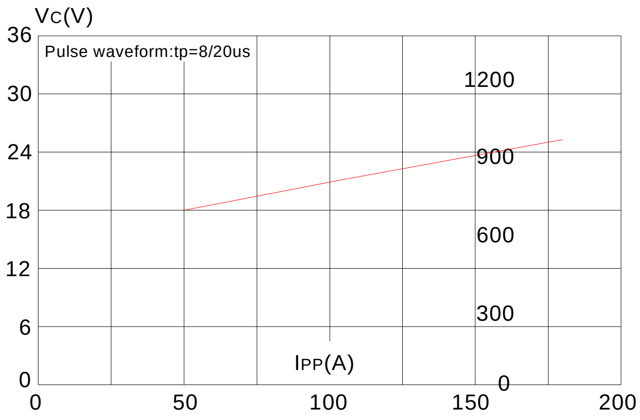
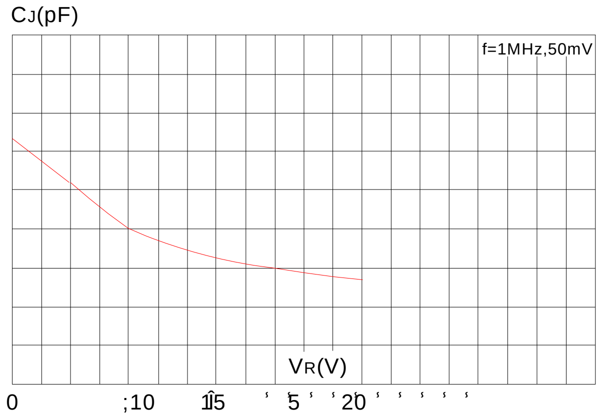
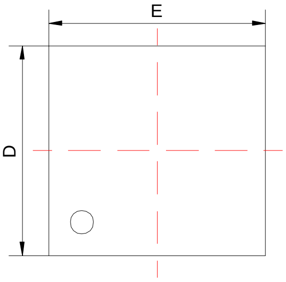
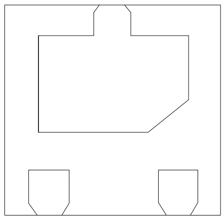


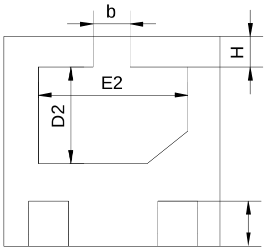
FIG.6:Capacitance vs.reverse voltage



PACKAGE MECHANICAL DATA







TAPE AND REEL INFORMATION-DFN2x2-3L