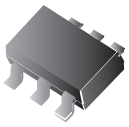
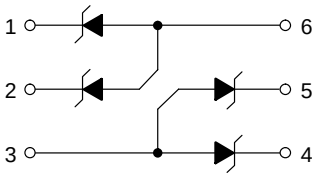
DF6A6.8FUT
ESD Protection Array

Specification Features

- SOT-363 Package Allows Four Separate Unidirectional Configurations
- Low Leakage < 1 μA @ 5 Volt
- Breakdown Voltage: 6.4 – 7.2 Volt @ 5 mA
- Low Capacitance (40 pF typical)
- ESD Protection Meeting 61000–4–2 Level 4 and 16 kV Human Body Model
- We declare that the material of product compliance with RoHS requirements.



SOT-363



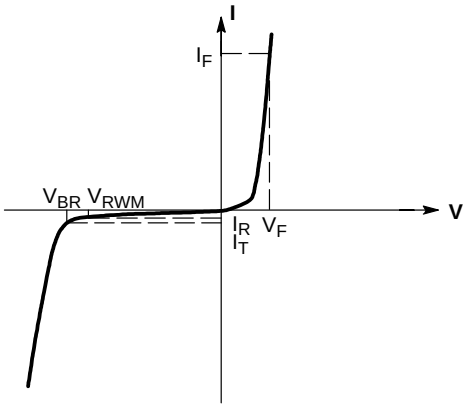
Mechanical Characteristics

- Void Free, Transfer–Molded, Thermosetting Plastic Case
- Corrosion Resistant Finish, Easily Solderable
- Package Designed for Optimal Automated Board Assembly
- Small Package Size for High Density Applications

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Rating	Symbol	Value	Unit
Peak Power Dissipation @ 8 x 20 μs (Note 1)	P_{pk}	75	Watts
Steady State Power Dissipation (Note 2)	P_D	385	mW
Thermal Resistance – Junction to Ambient Derate Above 25°C	$R_{\theta JA}$	328 3.0	°C/W mW/°C
Maximum Junction Temperature	T_{Jmax}	150	°C
Operating Junction and Storage Temperature Range	T_J, T_{stg}	–55 to +150	°C
ESD Discharge MIL STD 883C – Method 3015–6 IEC61000–4–2, Air Discharge IEC61000–4–2, Contact Discharge	V_{PP}	 16 16 8	kV
Lead Solder Temperature (10 seconds duration)	T_L	260	°C

1. Per Waveform Figure 1
2. Mounted on FR–5 Board = 1.0 X 0.75 X 0.062 in.



V–I Curve

ELECTRICAL CHARACTERISTICS

Device	Breakdown Voltage V_{BR} @ 5 mA (Volts)			Leakage Current I_{RM} @ V_{RWM} = 5 V	Typical Capacitance @ 0 V Bias	Max V_F @ I_F = 10 mA	Max Z_Z @ 5 mA	Max Z_{ZK} @ 0.5 mA
	Min	Nom	Max	(μA)	(pF)	(V)	(Ω)	(Ω)
DF6A6.8FUT	6.4	6.8	7.2	1.0	40	1.25	30	300

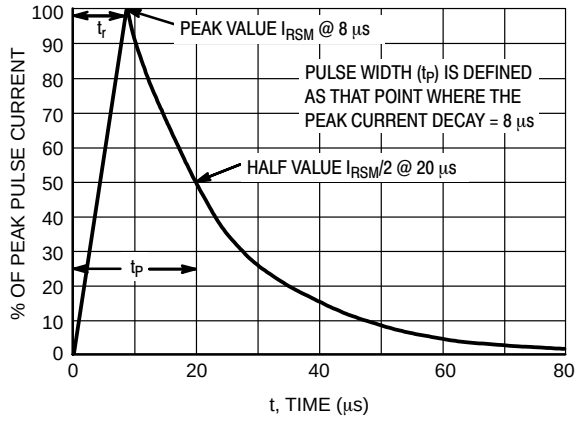


Figure 1. 8 × 20 μs Pulse Waveform

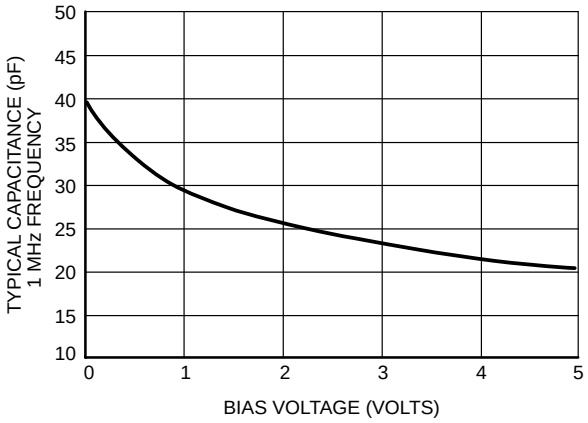


Figure 2. Capacitance

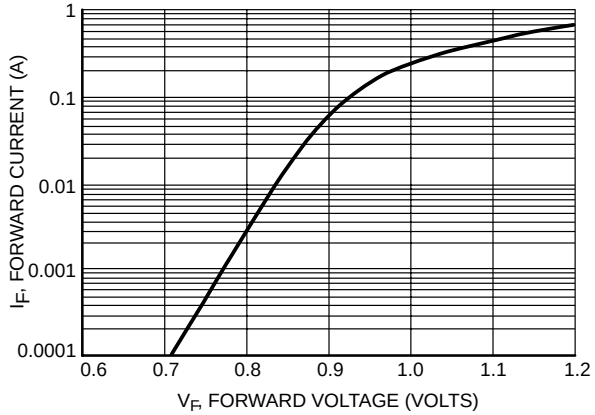


Figure 3. Forward Voltage

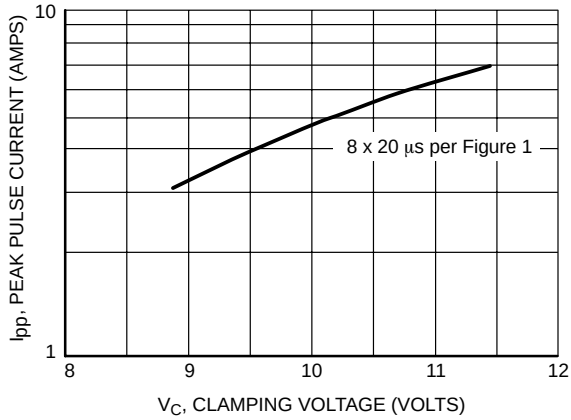
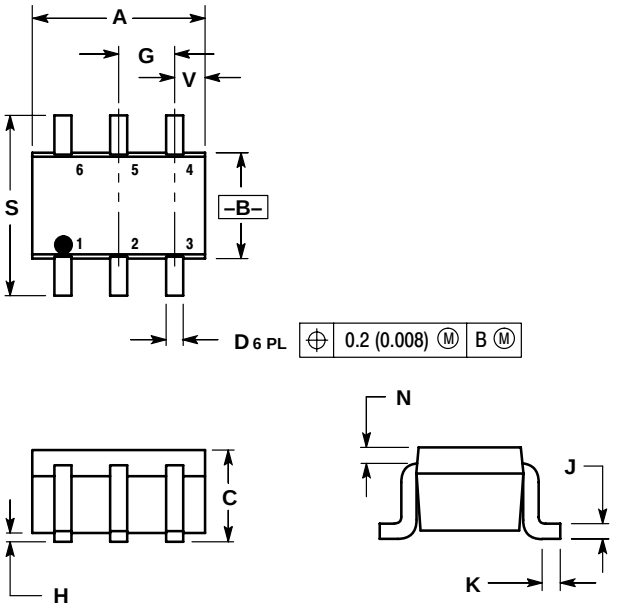


Figure 4. Clamping Voltage versus Peak Pulse Current

PACKAGE DIMENSIONS

SC–88 (SOT–363)



NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026 BSC		0.65 BSC	
H	---	0.004	---	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20
V	0.012	0.016	0.30	0.40