Thermal Characteristics

Characteristic	Symbol	Value	Unit
Peak Power Dissipation, 8x20μS Waveform (Note 5)	P_{pk}	18	W
Thermal Resistance, Junction-to-Ambient (Note 5)	$R_{\theta JA}$	417	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Type Number	Marking Code	Breakdown Voltage (Note 6)			Leakage Current (Note 6)		Capacitance @0V Bias(pF) (Note 7)		Capacitance @3V Bias(pF) (Note 7)	
		V_{BR} @ I_T = 5mA			I_{RM} @ V_{RM}		C_T		C_T	
		Min (V)	Nom (V)	Max (V)	Max(μA)	(V)	Typ	Max	Typ	Max
DUP412VP5	V1	11.4	12	12.7	0.5	9.0	6.5	10	3.5	5

Notes:
4. Non-repetitive current pulse per Figure 2 and derate above T_A = 25°C per Figure 1.
5. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch; pad layout as shown on Diodes Inc. Suggested Pad Layout Document AP02001, which can be found on our website at http://www.diodes.com.
6. Short duration pulse test used to minimize self-heating effect.
7. Per element, f = 1MHz, T_A = 25°C

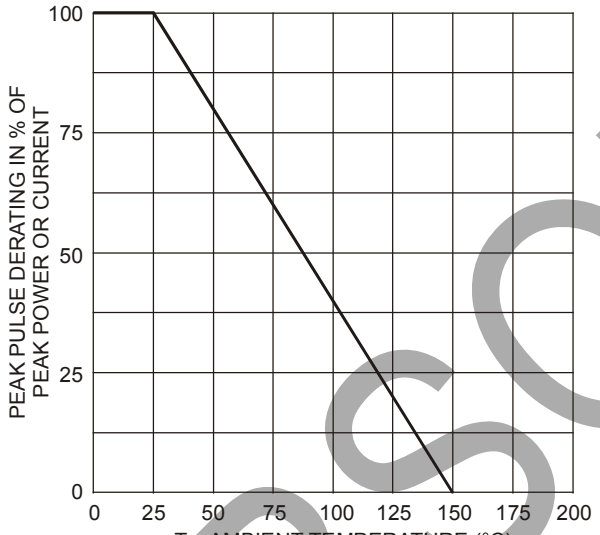


Fig. 1 Pulse Derating Curve

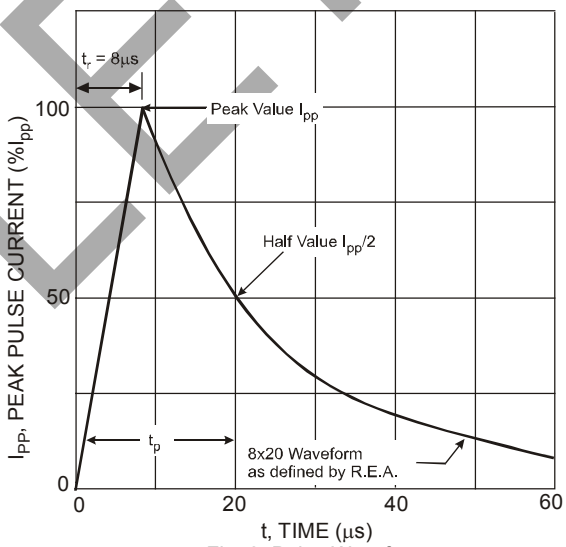


Fig. 2 Pulse Waveform

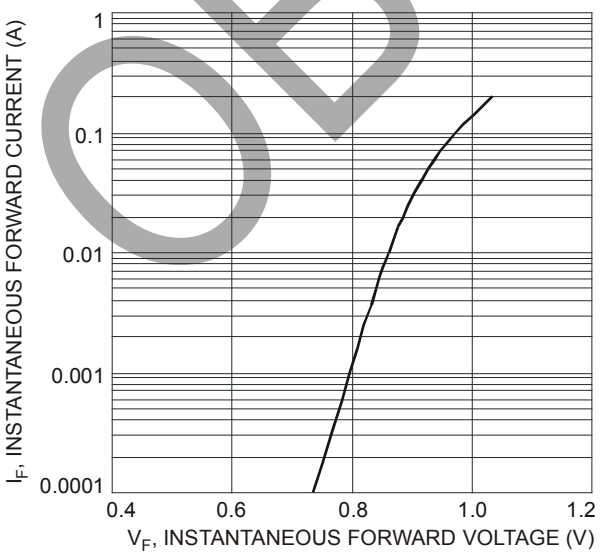


Fig. 3 Typical Forward Characteristics

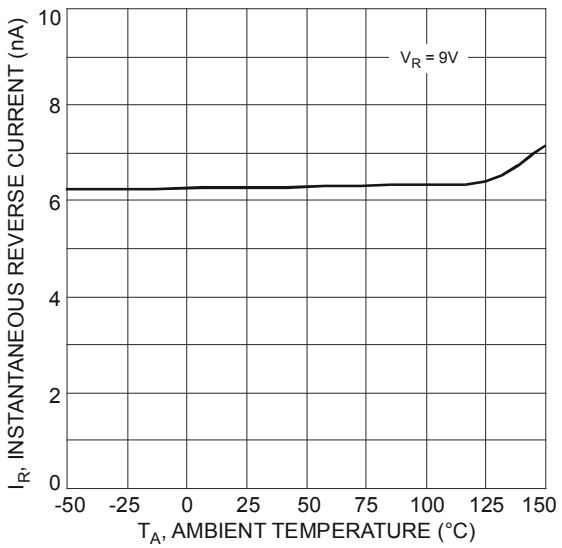


Fig. 4 Instantaneous Reverse Current vs. Ambient Temperature

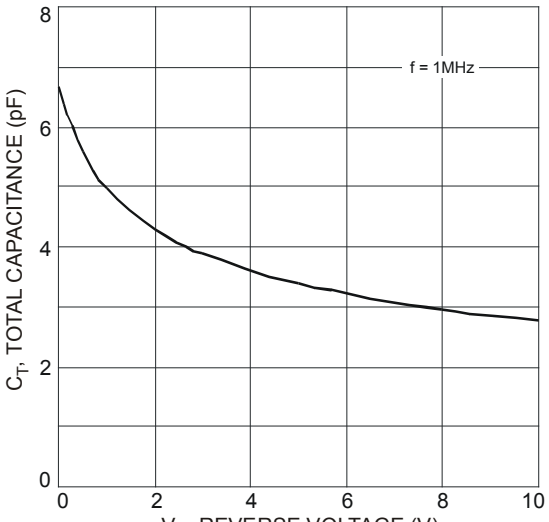
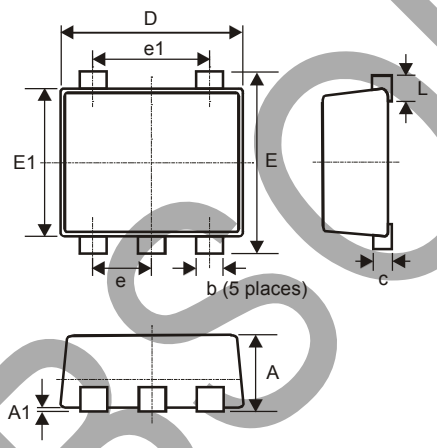


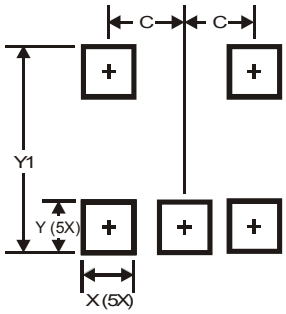
Fig. 5 Typical Total Capacitance vs. Reverse Voltage (Per Element)

Package Outline Dimensions



SOT-953			
Dim	**Min**	**Max**	**Typ**
A	0.40	0.50	0.45
A1	0	0.05	–
b	0.10	0.20	0.15
c	0.12	0.18	0.15
D	0.95	1.05	1.00
E	0.95	1.05	1.00
E1	0.75	0.85	0.80
e	–	–	0.35
e1	–	–	0.70
L	0.05	0.15	0.10
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
C	0.350
X	0.200
Y	0.200
Y1	1.100

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