

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit	Conditions
Peak Pulse Power Dissipation	P _{PP}	84	W	8/20μs, Per Fig. 2
Peak Pulse Current	I _{PP}	6	A	8/20μs, Per Fig. 2
ESD Protection – Contact Discharge	V _{ESD_Contact}	±30	kV	Standard IEC 61000-4-2
ESD Protection – Air Discharge	V _{ESD_Air}	±30	kV	Standard IEC 61000-4-2

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Package Power Dissipation (Note 5)	P _D	380	mW
Thermal Resistance, Junction to Ambient (Note 5)	R _{θJA}	327	°C/W
Operating Junction Temperature Range	T _J	-65 to +150	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Working Voltage	V _{RWM}	-	-	5.0	V	-
Breakdown Voltage	V _{BR}	6	7	8	V	I _R = 1.0mA
Reverse Leakage Current (Note 6)	I _R	-	10	100	nA	V _{RWM} = 5V
Clamping Voltage (Note 4)	V _{CL}	-	7.0	9.0	V	I _{PP} = 1A, t _p = 8/20μs
		-	8.7	10.7	V	I _{PP} = 3A, t _p = 8/20μs
		-	10.5	12.0	V	I _{PP} = 5A, t _p = 8/20μs
		-	11.5	14.0	V	I _{PP} = 6A, t _p = 8/20μs
Differential Resistance	R _{DIF}	-	0.2	-	Ω	I _R = 1.0A, t _p = 8/20μs
Channel Input Capacitance	C _T	-	15	20	pF	V _{IN} = 0V, f = 1MHz (Channel to Pin 2)

- Notes:
4. Measured from channel to pin 2; Non-repetitive current pulse per Fig. 2.
 5. Device mounted on FR-4 PCB pad layout (2oz copper) as shown on Diodes, Inc. suggested pad layout AP02001, which can be found on our website at <http://www.diodes.com>.
 6. Short duration pulse test used to minimize self-heating effect.

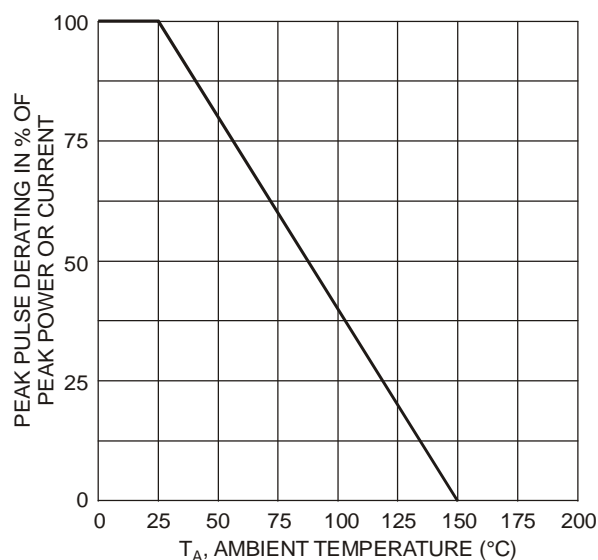


Fig. 1 Pulse Derating Curve

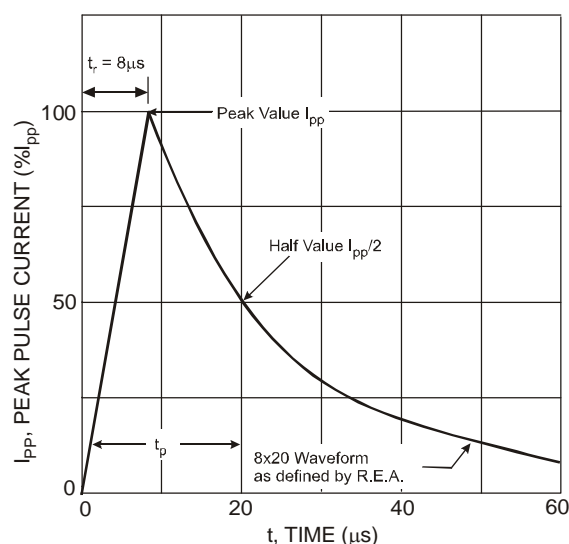


Fig. 2 Pulse Waveform

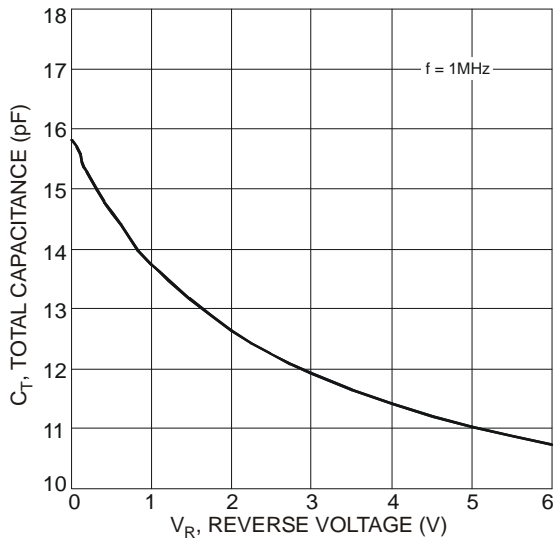


Fig. 3 Typical Total Capacitance vs. Reverse Voltage

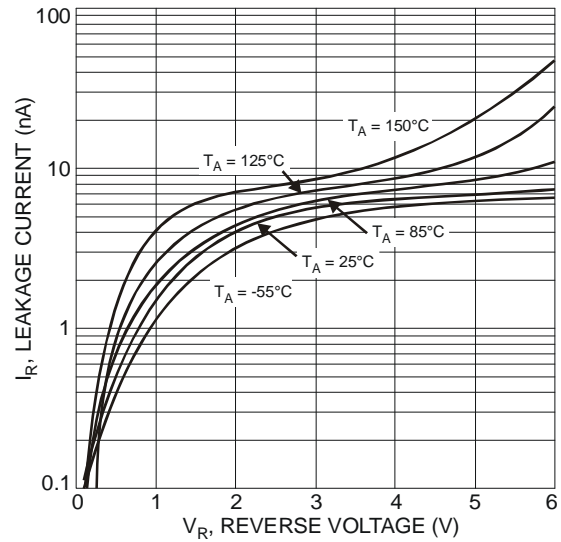
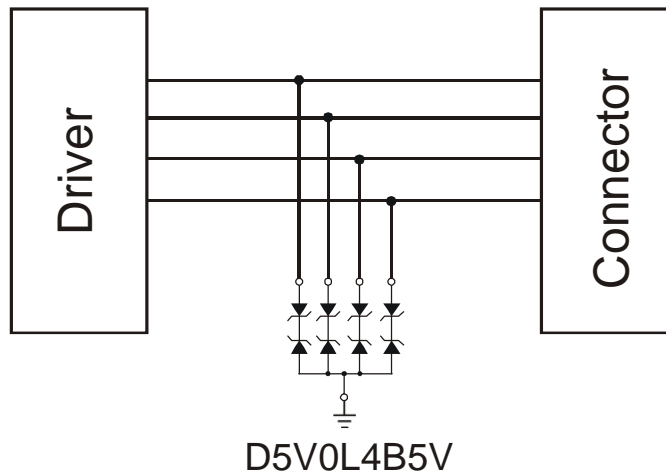
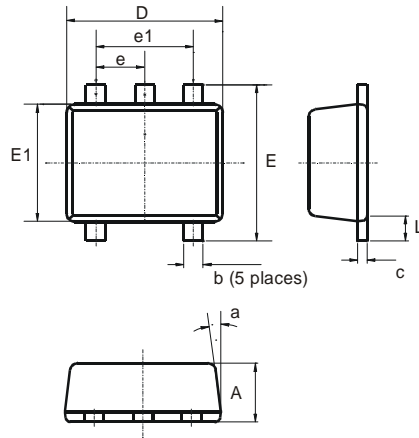


Fig. 4 Typical Reverse Characteristics

Typical Applications

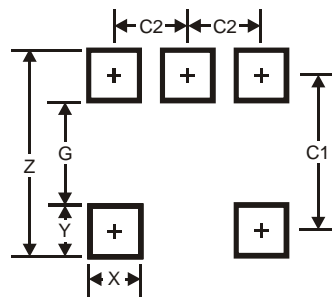


Package Outline Dimensions



SOT553			
Dim	Min	Max	Typ
A	0.55	0.60	0.60
c	0.10	0.18	0.15
D	1.50	1.70	1.60
E	1.55	1.70	1.60
E1	1.10	1.25	1.20
L	0.10	0.30	0.20
b	0.15	0.30	0.20
e	0.50 Typ		
e1	1.00 Typ		
a	6°	8°	7°
All Dimensions in mm			

Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.2
G	1.2
X	0.375
Y	0.5
C1	1.7
C2	0.5

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