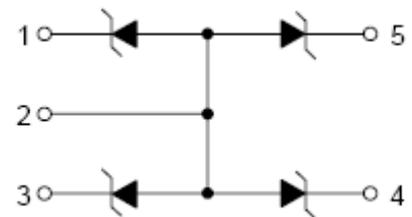
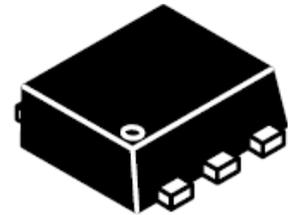


Features

- Small SOT-553 SMT Package
- Peak Power Dissipation 20W @8 x 20 us Pulse
- Low Leakage Current < 1uA @3 Volts
- Fast Response Time < 1 ns
- Low Capacitance
- ESD Protection to IEC 61000-4-2 Level 4
- Complies to USB 1.1 Low Speed & High Speed Specifications
- RoHS Compliant in Lead-Free Versions



Applications

- Instrumentation Equipment
- Serial and Parallel Ports
- Microprocessor Based Equipment
- Notebooks, Desktops, Servers

Absolute Maximum Ratings

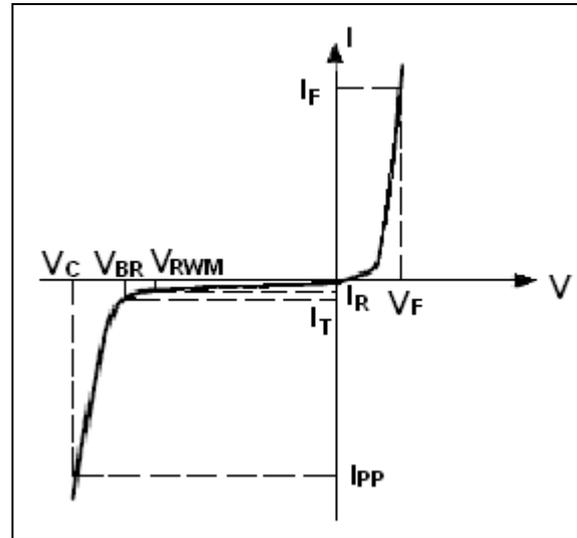
Parameter	Symbol	Value	Units
Peak Power Dissipation (Note 1.) @ $T_L = 25^\circ\text{C}$	P_{PK}	20	W
Steady State Power – 1 Diode (Note 2)	P_D	380	mW
Maximum Junction Temperature	T_{Jmax}	150	$^\circ\text{C}$
Operating Junction Temperature Range	T_J	-55 to 150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$

1. 8 X 20 us, non-repetitive Figure 1.
2. Only 1 diode under power. For all 4 diodes under power, P_D will be 25%. Mounted on Fr-4 board with min pad.

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Device	Marking	V_{RWM} (V)	I_R (uA) @ V_{RWM}	V_{BR} (V) @ 1 mA			V_C (V) @ $I_{PP}=1.6 A^*$	Capacitance @ 0V Bias (pF) (note 3)	
		Max	Max	Min	Nom	Max	Typ	Typ	Max
NZQA5V6AXV5	5PL	3.0	1.0	5.3	5.9	5.9	13	13	17
NZQA6V8AXV5	6PL	4.3	1.0	6.4	6.8	7.2	13	12	15

*Surge current waveform per Figure 1.

3. Capacitance of one diode at $f=1MHz, V_R=0V, T_A=25^\circ C$.

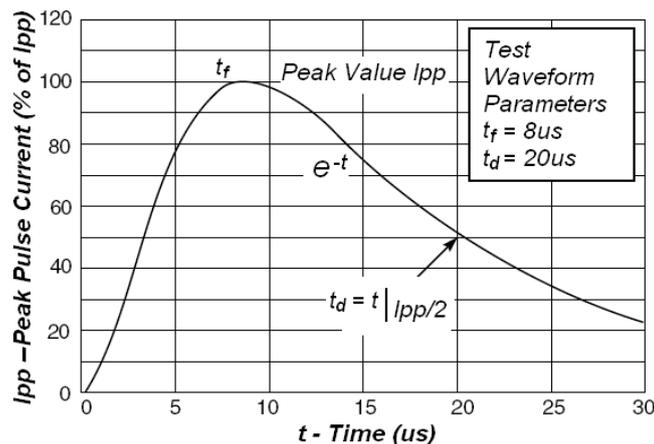


Fig1. Pulse Waveform

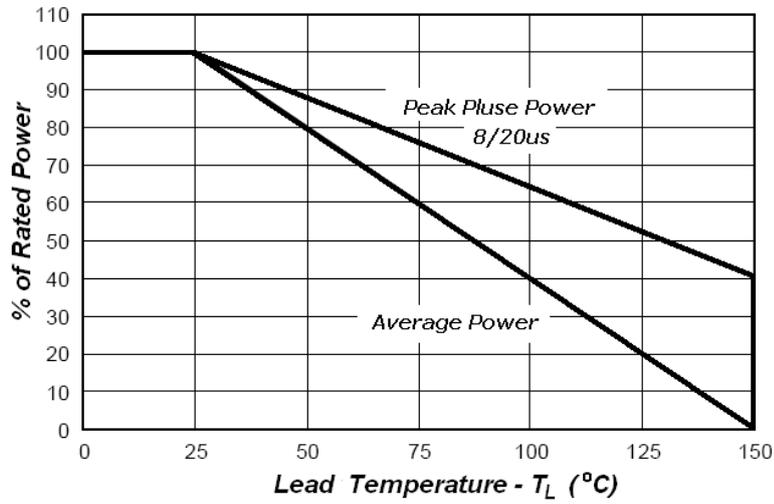
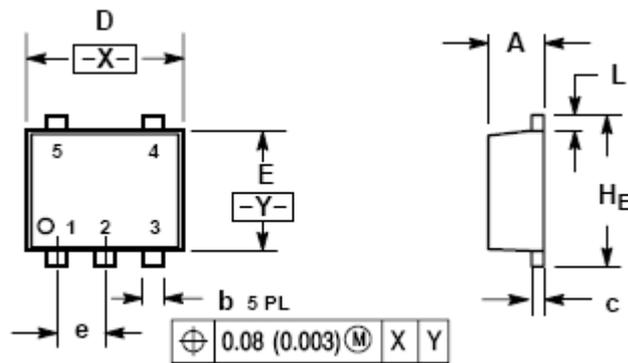


Fig2. Power Derating

Package Dimensions

SO5-553



Dim	Millimeters			Inches		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.50	0.55	0.60	0.020	0.022	0.024
b	0.17	0.22	0.27	0.007	0.009	0.011
c	0.08	0.13	0.18	0.003	0.005	0.007
D	1.50	1.60	1.70	0.059	0.063	0.067
E	1.10	1.20	1.30	0.043	0.047	0.051
e	0.50 BSC			0.020 BSC		
L	0.10	0.20	0.30	0.004	0.008	0.012
H _E	1.50	1.60	1.70	0.059	0.063	0.067