

Features

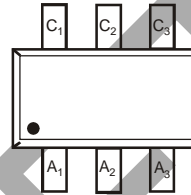
- Three Isolated Zeners in Ultra-Small Surface Mount Package
- Ideally Suited for Automated Assembly Processes
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **Qualified to AEC-Q101 Standards for High Reliability**

Mechanical Data

- Case: SOT363
- Case Material: Molded Plastic.
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208 ③
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 Leadframe).
- Orientation: See Diagram
- Weight: 0.006 grams (Approximate)



Top View



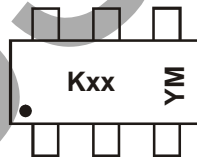
Package Pin Configuration

Ordering Information (Note 4)

Device	Packaging	Shipping
MMBZ5252BTS-7-F	SOT363	3000/Tape & Reel

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

Marking Information



Kxx = Product Type Marking Code
(See Electrical Characteristic Table)
YM = Date Code Marking
Y = Year (ex: A = 2013)
M = Month (ex: 9 = September)

Date Code Key

Year	2005	2006	2007	2008	2009	2010	2111	2012	2013	2014	2015
Code	S	T	U	V	W	X	Y	Z	A	B	C

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 5) @ I _F = 10mA	V _F	0.9	V

Note: 5. Short duration pulse test used to minimize self-heating effect.

Thermal Characteristics

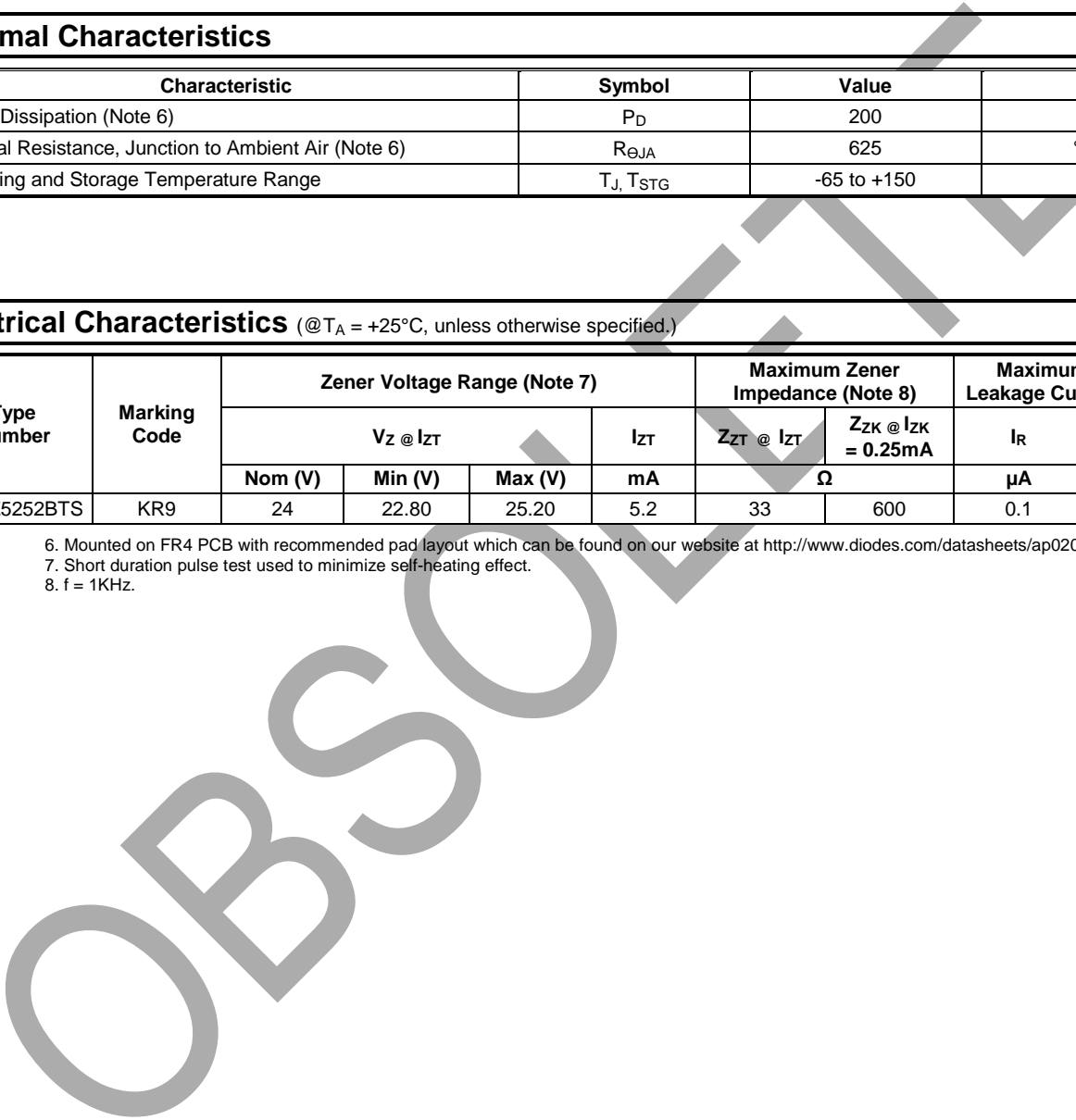
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P _D	200	mW
Thermal Resistance, Junction to Ambient Air (Note 6)	R _{θJA}	625	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Type Number	Marking Code	Zener Voltage Range (Note 7)				Maximum Zener Impedance (Note 8)		Maximum Reverse Leakage Current (Note 7)	
		V _Z @ I _{ZT}			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK} = 0.25mA	I _R	@ V _R
		Nom (V)	Min (V)	Max (V)	mA	Ω		μA	V
MMBZ5252BTS	KR9	24	22.80	25.20	5.2	33	600	0.1	18

 Notes: 6. Mounted on FR4 PCB with recommended pad layout which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 7. Short duration pulse test used to minimize self-heating effect.
 8. f = 1KHz.

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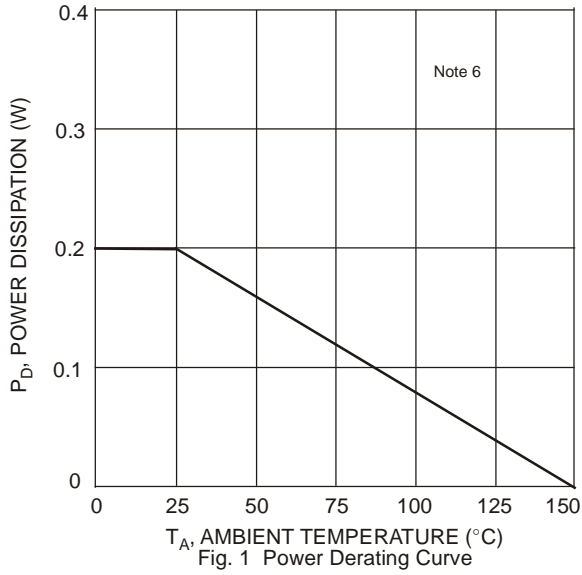


Fig. 1 Power Derating Curve

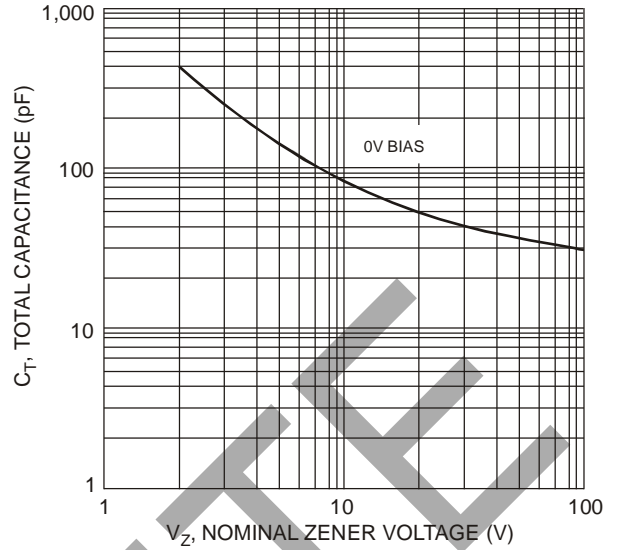


Fig. 2 Typical Total Capacitance vs. Nominal Zener Voltage

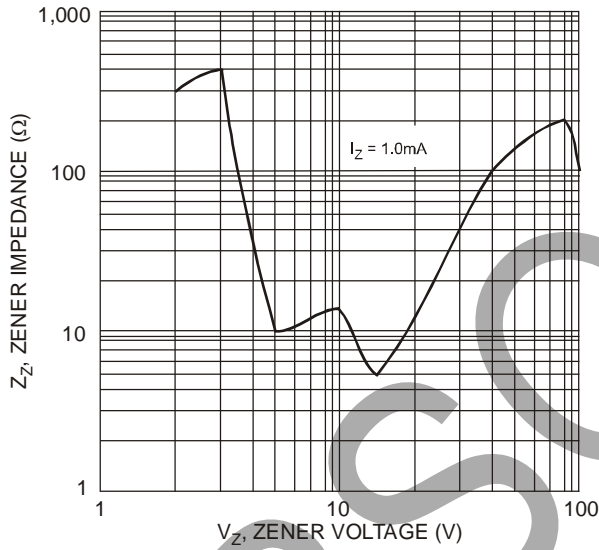


Fig. 3 Typical Zener Impedance Characteristics

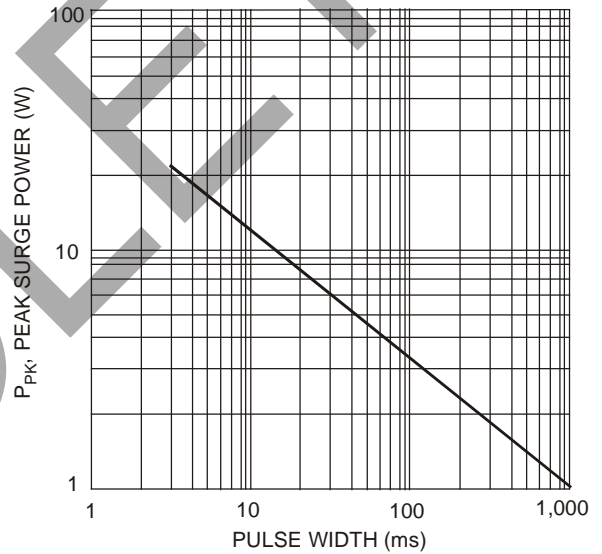


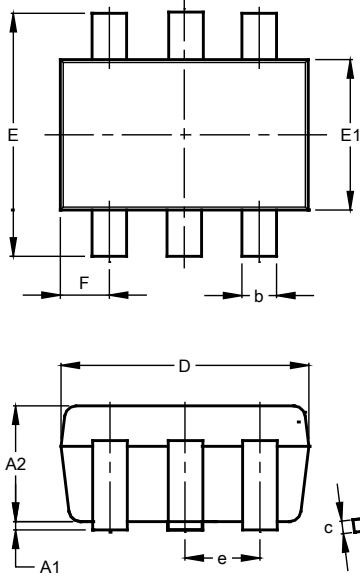
Fig. 4 Maximum Non-repetitive Surge Power

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Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOT363

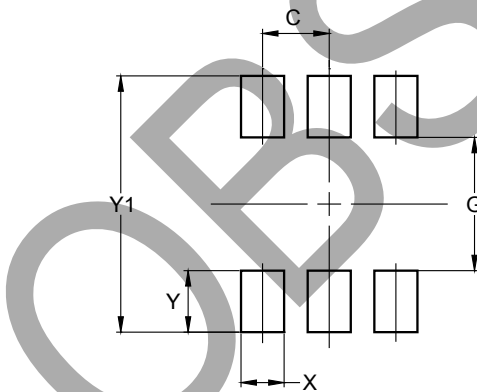


SOT363			
Dim	Min	Max	Typ
A1	0.00	0.10	0.05
A2	0.90	1.00	0.95
b	0.10	0.30	0.25
c	0.10	0.22	0.11
D	1.80	2.20	2.15
E	2.00	2.20	2.10
E1	1.15	1.35	1.30
e	0.650 BSC		
F	0.40	0.45	0.425
L	0.25	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOT363



Dimensions	Value (in mm)
C	0.650
G	1.300
X	0.420
Y	0.600
Y1	2.500

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