



## TBZ363C5V5 - TBZ363C20V8

TRIPLE BI-DIRECTIONAL SURFACE MOUNT ZENER DIODE ARRAY

#### **Features**

- Nominal Zener Voltages: 5.5V, 6.4V, 7.0V, 20.8V
- Ultra-Small Surface Mount Package
- Ideal For Transient Suppression
- Lead Free/RoHS Compliant (Note 4)
- "Green" Device (Note 5 and 6)

## **Mechanical Data**

- Case: SOT-363
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Marking Information: See Page 2
- Ordering Information: See Page 2
- Weight: 0.0061 grams (approximate)



Top View

Device Schematic

# Thermal Characteristics

Characteristic		Symbol	Value	Unit	
Power Dissipation	(Note1)	PD	200	mW	
Thermal Resistance, Junction to Ambient Air	(Note 1)	$R_{ ext{ heta}JA}$	625	°C/W	
Operating and Storage Temperature Range		T <sub>J,</sub> T <sub>STG</sub>	-65 to +150	°C	

# Electrical Characteristics @T<sub>A</sub> = 25°C unless otherwise specified

Туре	Zener Voltage Range (Note 2)		Maximum Zener Impedance (Note 3)					n Reverse (Note 2)	Temperature Coefficient			
Number	Code	V <sub>Z @</sub> I <sub>ZT</sub>		Z <sub>ZT @</sub> I <sub>ZT</sub>		Z <sub>ZK @</sub> I <sub>ZK</sub>		I <sub>R @</sub> V <sub>R</sub>		TC (mV/°C)		
		Nom (V)	Min (V)	Max (V)	Ω	mA	Ω	mA	μΑ	v	Min	Max
TBZ363C5V5	KL1	5.5	5.22	5.78	80	5.0	500	1.0	1.0	2.0	-5.5	-2.2
TBZ363C6V4	KL3	6.4	6.08	6.72	50	5.0	400	1.0	2.0	3.0	-4.0	0.5
TBZ363C7V0	KL5	7.0	6.65	7.35	18	5.0	200	1.0	2.0	4.0	-1.6	1.7
TBZ363C20V8	KV7	20.8	19.76	21.84	58	5.0	225	1.0	0.1	14	12.4	16.0

Notes: Mounted on FR4 PC Board with recommended pad layout which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf. 1

Vz measured @ IzT using a short duration pulse. Standard voltage tolerance is 5%. 2.

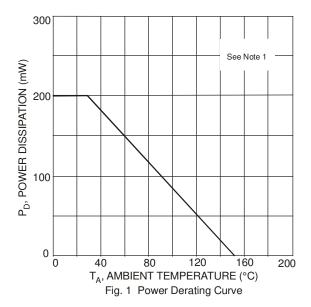
f = 1 KHz.3.

No purposefully added lead. 4.

5.

Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead\_free/index.php. Product manufactured with Date Code UO (week 40, 2007) and newer are built with Green Molding Compound. Product manufactured prior to Date 6. Code UO are built with Non-Green Molding Compound and may contain Halogens or Sb<sub>2</sub>O<sub>3</sub> Fire Retardants.



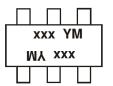


# Ordering Information (Note 7)

Device	Packaging	Shipping
TBZ363C5V5-7-F	SOT-363	3000/Tape & Reel
TBZ363C6V4-7-F	SOT-363	3000/Tape & Reel
TBZ363C7V0-7-F	SOT-363	3000/Tape & Reel
TBZ363C20V8-7-F	SOT-363	3000/Tape & Reel

Notes: 7. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

# **Marking Information**



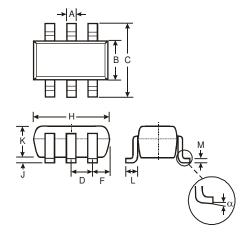
xxx = Product Type Marking Code (See Electrical Characteristics Table) YM = Date Code Marking Y = Year (ex: N = 2002) M = Month (ex: 9 = September)

Date Code Key

Year	2002	2003	2004	2005	200	6 20	07	2008	2	009	2010	2111	2012
Code	Ν	Р	R	S	Т	I	J	V		W	Х	Y	Z
Month	Jan	Feb	Mar	Apr	May	Jun	Ju	ΙΑι	ıg	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	3	9	0	Ν	D

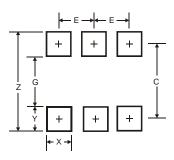


# **Package Outline Dimensions**



SOT-363						
Dim	Min	Max				
Α	0.10	0.30				
В	1.15 1.35					
С	2.00	2.20				
D	0.65 Nominal					
F	0.40 0.45					
Н	1.80	2.20				
J	0 0.10					
К	0.90 1.00					
L	0.25 0.40					
М	0.10 0.22					
α	0°	8°				
All Di	All Dimensions in mm					

# Suggested Pad Layout



Dimensions	Value (in mm)
Z	2.5
G	1.3
Х	0.42
Y	0.6
С	1.9
E	0.65

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