



# QZX363C5V6 - QZX363C20

## QUAD SURFACE MOUNT ZENER DIODE ARRAY

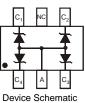
## **Features**

- Nominal Zener Voltages: 5.6V, 6.8V, 12V, 15V, 20V
- 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. 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).
- Orientation: See Diagram
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.006 grams (approximate)





## Maximum Ratings @T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%.							
Cha	aracteristic	Symbol	Value	Unit			
Forward Voltage	(Note 1) @ I <sub>F</sub> = 10mA	VF	0.9	V			

## Thermal Characteristics

Characteristic		Symbol	Value	Unit	
Power Dissipation		PD	200	mW	
Thermal Resistance, Junction to Ambient Air	(Note 3)	R <sub>0JA</sub>	625	°C/W	
Operating and Storage Temperature Range	(Note 3)	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C	

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

Type Number	Marking Code	5			Maxin	num Zen (Not	er Impe te 2)	dance	Maximum Current		Coeffic Zener \	erature cient of /oltage = 5mA	
		Vz	Vz @ Izt = 5.0mA		Vz @ Izt = 5.0mA Zzt @		@ I <sub>ZT</sub>	Z <sub>ZK</sub> @ I <sub>ZK</sub>		I <sub>R</sub> @ V <sub>R</sub>		T <sub>C</sub> (mV/°C)	
		Nom (V)	Min (V)	Max (V)	Ω	mA	Ω	mA	μΑ	V	Min	Max	
QZX363C5V6	K5F	5.6	5.32	5.88	40	5.0	400	1.0	1.0	2.0	-2.0	2.5	
QZX363C6V8	K6F	6.8	6.47	7.14	15	5.0	80	1.0	2.0	4.0	1.2	4.5	
QZX363C12	KFF	12	11.4	12.7	25	5.0	150	1.0	0.1	8.0	6.0	10.0	
QZX363C15	KJF	15	13.8	15.6	30	5.0	200	1.0	0.1	10.5	9.2	13.0	
QZX363C20	KMF	20	19.0	21.0	55	5.0	225	1.0	0.1	14	14.4	18.0	

Notes: Short duration pulse test used to minimize self-heating effect. 1.

f = 1 KHz.2.

Device mounted on FR-4 PC board with recommended pad layout, which can be found on our website at 3.

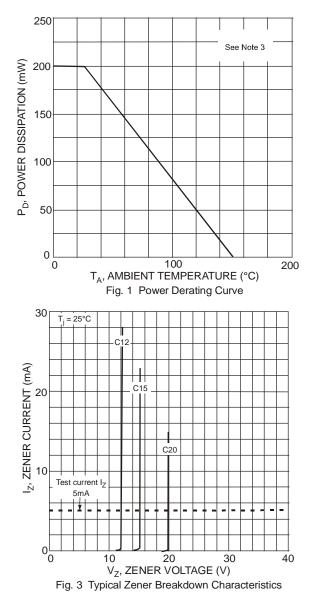
http://www.diodes.com/datasheets/ap02001.pdf.

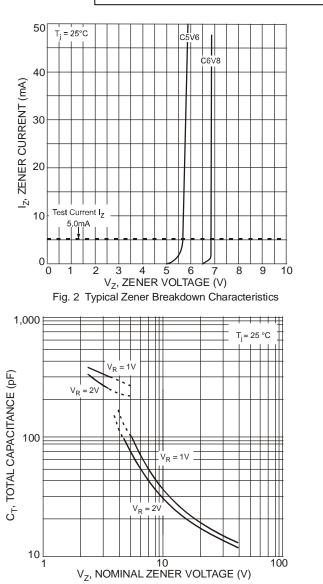
No purposefully added lead. 4.

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 Sb2O3 Fire Retardants.







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Fig. 4 Typical Total Capacitance vs. Nominal Zener Voltage

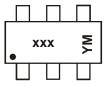


## Ordering Information (Note 7)

Device	Packaging	Shipping
QZX363C5V6-7-F	SOT-363	3000/Tape & Reel
QZX363C6V8-7-F	SOT-363	3000/Tape & Reel
QZX363C12-7-F	SOT-363	3000/Tape & Reel
QZX363C15-7-F	SOT-363	3000/Tape & Reel
QZX363C20-7-F	SOT-363	3000/Tape & Reel

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

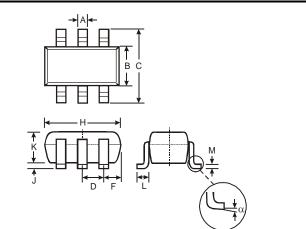
# **Marking Information**



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

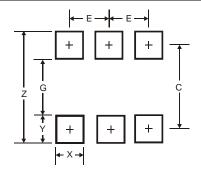
Date Code Key														
Year	2000	2001	2002	2003	2004	2005	200	6 20	007	2008	2009	2010	2111	2012
Code	L	М	Ν	Р	R	S	Т	l	U	V	W	Х	Y	Z
Month	Jan	Feb	Mar	Apr	Ма	ıy J	un	Jul	4	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5		6	7		8	9	0	Ν	D

# **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 No	ominal				
F	0.40 0.45					
Н	1.80	2.20				
J	0 0.10					
ĸ	0.90	1.00				
L	0.25 0.40					
М	0.10 0.22					
α	0°	8°				
All Di	mensions	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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