TBZ363C5V5 - TBZ363C20V8

TRIPLE BI-DIRECTIONAL SURFACE MOUNT ZENER DIODE ARRAY

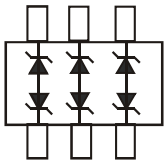
Features

- 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)	P_D	200	mW
Thermal Resistance, Junction to Ambient Air	(Note 1)	$R_{\theta JA}$	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 2)			Maximum Zener Impedance (Note 3)				Maximum Reverse Current (Note 2)		Temperature Coefficient	
		V_Z @ I_{ZT}			Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}		I_R @ V_R		TC (mV/°C)	
		Nom (V)	Min (V)	Max (V)	Ω	mA	Ω	mA	μA	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:
1. Mounted on FR4 PC Board with recommended pad layout which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
2. V_Z measured @ I_{ZT} using a short duration pulse. Standard voltage tolerance is 5%.
3. f = 1KHz.
4. No purposefully added lead.
5. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com/products/lead_free/index.php.
6. Product manufactured with Date Code UO (week 40, 2007) and newer are built with Green Molding Compound. Product manufactured prior to Date Code UO are built with Non-Green Molding Compound and may contain Halogens or Sb_2O_3 Fire Retardants.

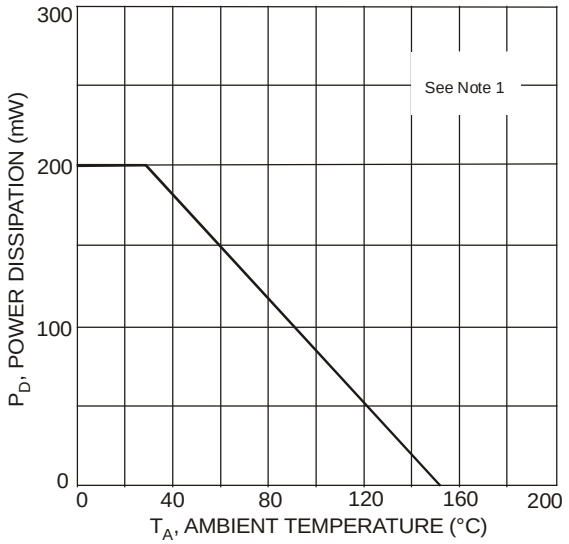


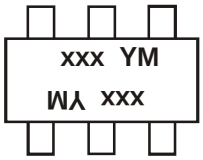
Fig. 1 Power Derating Curve

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



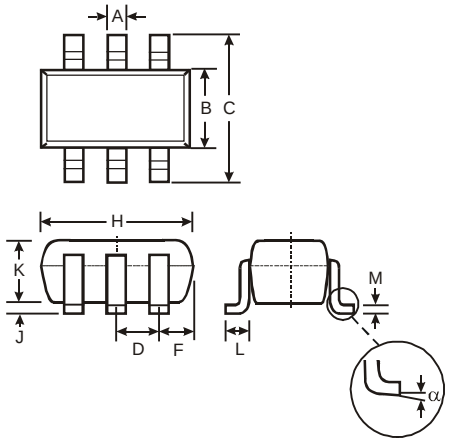
xxx = Product Type Marking Code
(See Electrical Characteristics Table)
YM = Date Code Marking
Y = Year (ex: N = 2002)
M = Month (ex: 9 = September)

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2111	2012
Code	N	P	R	S	T	U	V	W	X	Y	Z

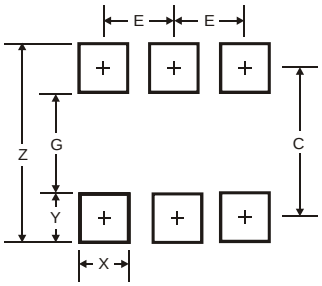
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Package Outline Dimensions



SOT-363		
Dim	**Min**	**Max**
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.40	0.45
H	1.80	2.20
J	0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.22
α	0°	8°
All Dimensions in mm		

Suggested Pad Layout



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