

TRIPLE LOW CAPACITANCE MOUNT ZENER DIODE ARRAY UNDER DEVELOPMENT

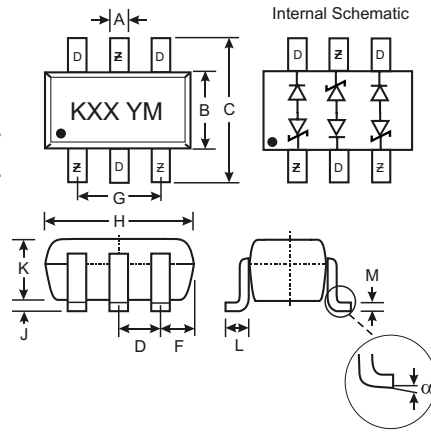
NEW PRODUCT

Features

- Planar Die Construction
- 200mW Power Dissipation
- Nominal Zener Voltages: 5.5V, 6.4V, 7.0V, 20.8V
- Ultra-Small Surface Mount Package

Mechanical Data

- Case: SOT-363, Molded Plastic
- Case material - UL Flammability Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Orientation: See Diagram
- Marking: See Sheet 2
- Weight: 0.006 grams (approx.)
- Ordering Information, See Sheet 2



| 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 | 0.30 | 0.40 |
| H | 1.80 | 2.20 |
| J | — | 0.10 |
| K | 0.90 | 1.00 |
| L | 0.25 | 0.40 |
| M | 0.10 | 0.25 |
| α | 0° | 8° |
| All Dimensions in mm | | |

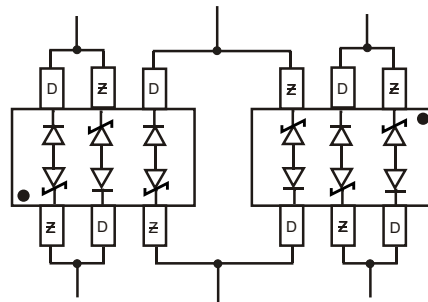
Maximum Ratings @ T_A = 25°C unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|--|-----------------------------------|-------------|------|
| Zener Current (See Table Below) | — | — | — |
| Power Dissipation (Note 1) | P _d | 200 | mW |
| Thermal Resistance, Junction to Ambient Air (Note 1) | R _{θJA} | 625 | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | °C |

| Type Number | Marking Code | Zener Voltage Range (Note 2) | | | Maximum Zener Impedance | | | | Maximum Reverse Current | | Maximum Junction Capacitance |
|-------------|--------------|----------------------------------|---------|---------|-----------------------------------|------|-----------------------------------|------|---------------------------------|-----|------------------------------|
| | | V _Z @ I _{ZT} | | | Z _{ZT} @ I _{ZT} | | Z _{ZK} @ I _{ZK} | | I _R @ V _R | | C _J |
| | | Nom (V) | Min (V) | Max (V) | (Ω) | (mA) | (Ω) | (mA) | (μA) | (V) | pF |
| TLC363C5V5 | K01 | 5.5 | 5.22 | 5.78 | 80 | 5.0 | 500 | 1.0 | 1.0 | 2.0 | 4.0 |
| TLC363C6V4 | K03 | 6.4 | 6.08 | 6.72 | 35 | 5.0 | 1800 | .25 | 2.0 | 3.0 | 4.0 |
| TLC363C7V0 | K05 | 7.0 | 6.65 | 7.35 | 18 | 5.0 | 200 | 1.0 | 2.0 | 4.0 | 4.0 |
| TLC363C20V8 | KN7 | 20.8 | 19.76 | 21.84 | 58 | 5.0 | 225 | 1.0 | 0.05 | 14 | 4.0 |

Notes: 1. Mounted on FR4 PC Board with recommended pad layout at <http://www.diodes.com/datasheets/ap02001.pdf>.
2. V_Z measured @ I_{ZT} using a short duration pulse. Standard voltage tolerance is 5%.

APPLICATION



Two packages connected to yield three low capacitance bi-directional zener circuits.

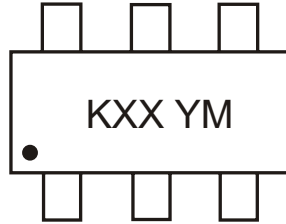
Ordering Information (Note 3)

| Device | Packaging | Shipping |
|------------------|-----------|------------------|
| (Type Number)-7* | SOT-363 | 3000/Tape & Reel |

* Add "-7" to the appropriate type number in Table 1 from Sheet 2 example: 6.4V Zener = TLC363C6V4-7.

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

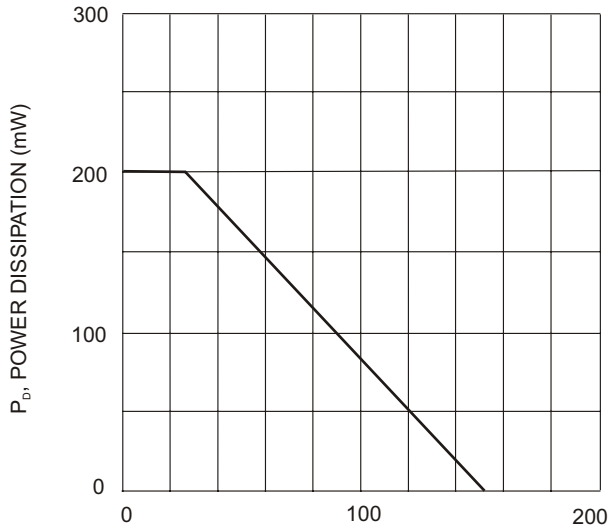


KXX = Product Type Marking Code, See Sheet 1
 YM = Date Code Marking
 Y = Year ex: N = 2002
 M = Month ex: 9 = September

Date Code Key

| Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|------|------|------|------|------|------|------|------|------|
| Code | N | P | R | S | T | U | V | W |

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



T_A, AMBIENT TEMPERATURE, °C
 Fig. 1. Power Derating Curve

UNDER DEVELOPMENT