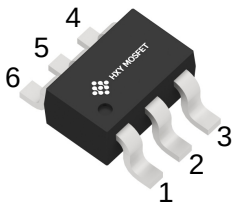
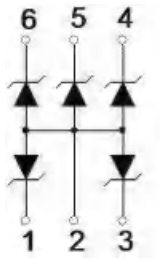
## Discription

The SMF05C.TCT is a 5-channel ultra low capacitance rail clamp ESD protection diodes array. Each channel consists of a pair of ESD diodes that steer positive or negative ESD current to either the positive or negative rail.A zener diode is integrated in to the array between the positive and negative supply rails.In the typical applications, the negative rail pin (assigned as GND) is connected with system ground. The Positive ESD current is steered to the ground through an ESD diode and Zener diode and the positive ESD voltage is clamped to the zener voltage.




SOT-363




Circuit Diagram

## Features

★ Uni-directional ESD protection of 5 lines
★ IEC 61000-4-2 Level 4 ESD protection
★ Low reverse stand−off voltage: 5V
★ Low reverse clamping voltage
★ Low leakage current
★ Fast response time
★ Small package saves board space
★ RoHS compliant

## Ordering Information

| Product ID | Pack | Qty(PCS) |
|---|---|---|
| SMF05C.TCT | SOT-363 | 3000 |

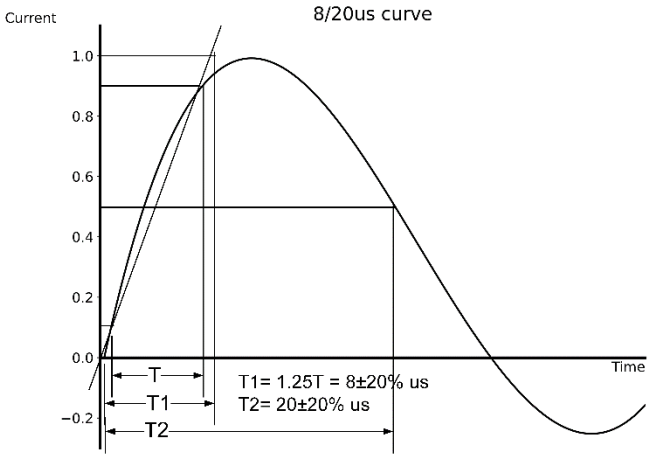
## Absolute Ratings(Tamb = 25°C)

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $P_{PP}$ | Peak Pulse Power ($t_p$ = 8/20 μ s) | 100 | W |
| $T_L$ | Maximum lead temperature for soldering during 10s | 260 | °C |
| $T_{stg}$ | Storage Temperature Range | -55 to +150 | °C |
| $T_{op}$ | Operating Temperature Range | -55 to +150 | °C |
| $T_j$ | Maximum junction temperature | 150 | °C |
| | IEC61000-4-2 (ESD) air discharge<br>contact discharge | ±17<br>±12 | KV |
| | IEC61000-4-4 (EFT) | 40 | A |

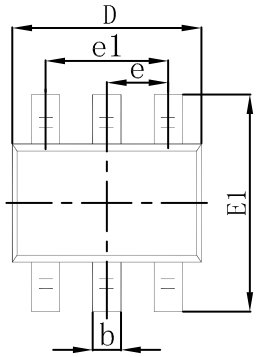
## Electrical Characteristics Ratings at 25°C

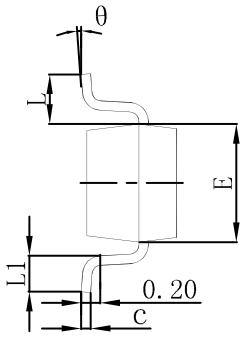
| Symbol | Parameter | Test Condition | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| $V_{RWM}$ | Reverse Working Voltage | | | | 5 | V |
| $V_{BR}$ | Reverse Breakdown Voltage | $I_T$ = 1mA | 6.2 | | | V |
| $I_R$ | Reverse Leakage Current | $V_{RWM}$ = 5V | | | 1.0 | μA |
| $V_C$ | Clamping Voltage | $I_{PP}$ = 1A, $t_p$ = 8/20μs | | 9.5 | | V |
| | | $I_{PP}$ = 8A, $t_p$ = 8/20μs | | 15 | | V |
| $C_J$ | Junction Capacitance | $V_R$ = 0V, f = 1MHz | | 100 | | pF |

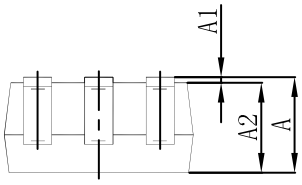
## Typical Characteristics



## SOT-363 Package Outline Dimensions

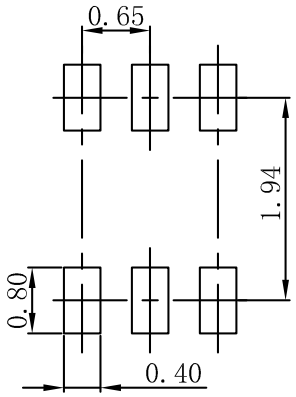



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | Min | Max | Min | Max |
| A | 0.900 | 1.100 | 0.035 | 0.043 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.000 | 0.035 | 0.039 |
| b | 0.150 | 0.350 | 0.006 | 0.014 |
| c | 0.100 | 0.150 | 0.004 | 0.006 |
| D | 2.000 | 2.200 | 0.079 | 0.087 |
| E | 1.150 | 1.350 | 0.045 | 0.053 |
| E1 | 2.150 | 2.400 | 0.085 | 0.094 |
| e | 0.650 TYP | | 0.026 TYP | |
| e1 | 1.200 | 1.400 | 0.047 | 0.055 |
| L | 0.525 REF | | 0.021 REF | |
| L1 | 0.260 | 0.460 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

## SOT-363 Suggested Pad Layout




Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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## HXY MOSFET:

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