

Capacitance Values

| Part Number | pF Pin 1,8-6,7 / 4,5-6,7 Tip-Ground, Ring-Ground | | pF Pin 1,8-4,5 Tip-Ring | |
|-------------|--|-----|-------------------------------|-----|
| | MIN | MAX | MIN | MAX |
| P0641DF-1E | 40 | 90 | 20 | 45 |
| P0721DF-1E | 35 | 85 | 20 | 45 |
| P0901DF-1E | 30 | 80 | 20 | 40 |
| P0991DF-1E | 25 | 75 | 15 | 35 |
| P1001DF-1E | 25 | 75 | 15 | 35 |
| P1101DF-1E | 25 | 70 | 15 | 30 |
| P1301DF-1E | 20 | 70 | 15 | 30 |
| P1701DF-1E | 20 | 70 | 15 | 30 |

Note: Off-state capacitance (C_o) is measured at 1 MHz with a 2V bias

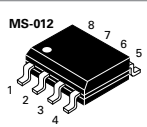
Surge Ratings

| Series | I_{PP} | | | | I_{TSM} | di/dt |
|--------|----------|---------------|----------------|---------|------------------------|-------------|
| | 2/10 | 1.2/50 - 8/20 | 10/700 - 5/310 | 10/1000 | 600V _{RMS} 1s | |
| | A min | A min | A min | A min | A min | Amps/μs max |
| F | 120 | 100 | 50 | 30 | 1 | 500 |

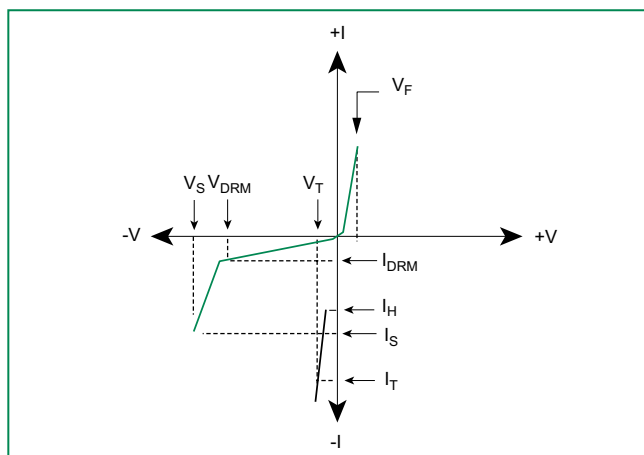
Notes:

- Peak pulse current rating (I_{pp}) is repetitive and guaranteed for the life of the product that is in thermal equilibrium.
- I_{pp} ratings applicable over temperature range of -40°C to +85°C
- The component must initially be in thermal equilibrium with -40°C ≤ T_J ≤ +150°C

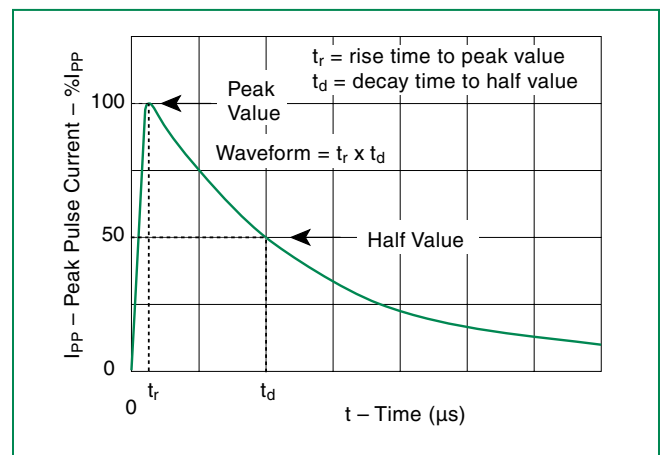
Thermal Considerations

| Package | Symbol | Parameter | Value | Unit |
|---|-----------------|---|-------------|------|
|  | T_J | Operating Junction Temperature Range | -40 to +150 | °C |
| | T_S | Storage Temperature Range | -65 to +150 | °C |
| | $R_{\theta JA}$ | Thermal Resistance: Junction to Ambient | 120 | °C/W |

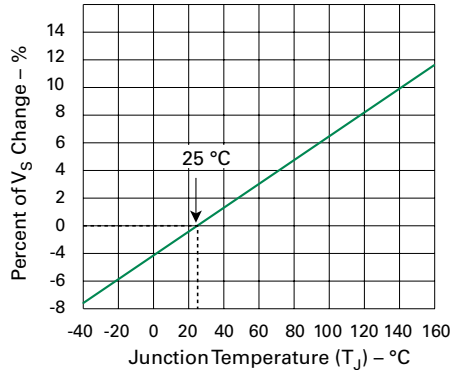
V-I Characteristics



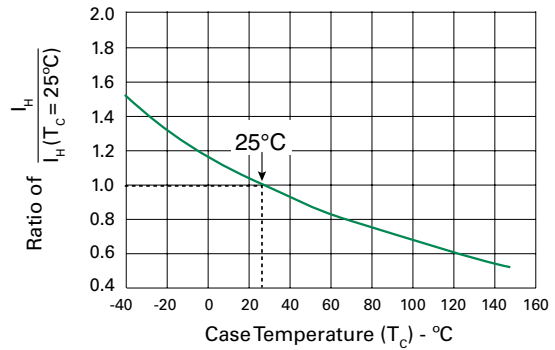
$t_r \times t_d$ Pulse Waveform



Normalized V_s Change vs. Junction Temperature

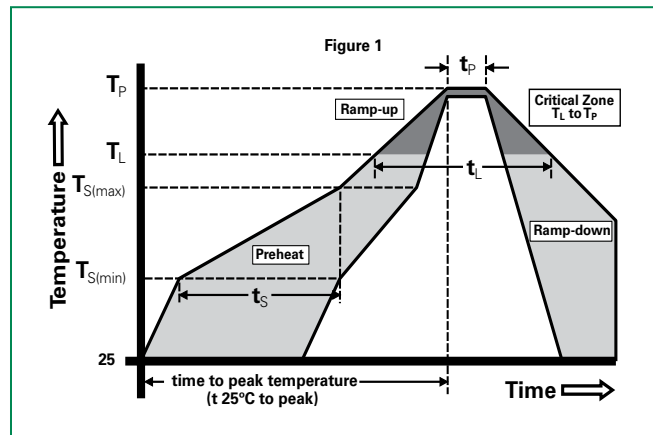


Normalized DC Holding Current vs. Case Temperature



Soldering Parameters

| | | |
|--|-----------------------------------|--------------|
| Reflow Condition | Pb-Free assembly (see Fig. 1) | |
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150°C |
| | -Temperature Max ($T_{s(max)}$) | +200°C |
| | -Time (Min to Max) (t_s) | 60-180 secs. |
| Average ramp up rate (Liquidus Temp (T_L) to peak) | 3°C/sec. Max. | |
| $T_{s(max)}$ to T_L - Ramp-up Rate | 3°C/sec. Max. | |
| Reflow | -Temperature (T_L) (Liquidus) | +217°C |
| | -Temperature (t_L) | 60-150 secs. |
| Peak Temp (T_p) | +260(+0/-5)°C | |
| Time within 5°C of actual PeakTemp (t_p) | 30 secs. Max. | |
| Ramp-down Rate | 6°C/sec. Max. | |
| Time 25°C to Peak Temp (T_p) | 8 min. Max. | |
| Do not exceed | +260°C | |



Physical Specifications

| | |
|------------------------|--|
| Lead Material | Copper Alloy |
| Terminal Finish | 100% Matte-Tin Plated |
| Body Material | UL Recognized compound meeting flammability rating V-0 |

Additional Information



Datasheet



Resources

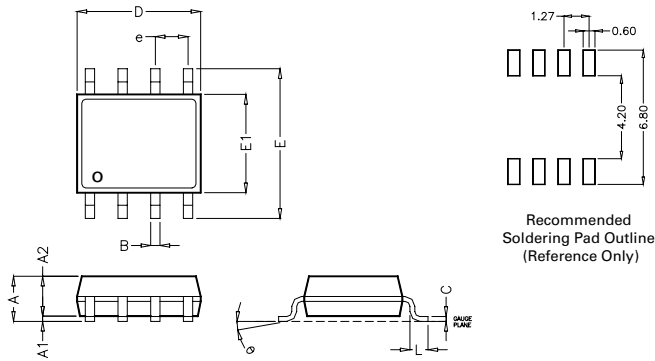


Samples

Environmental Specifications

| | |
|---|---|
| High Temp Voltage Blocking | 80% Rated V_{DRM} (V_{DC}) +125°C or +150°C, 504 or 1008 hrs. MIL-STD-750 (Method 1040) JEDEC, JESD22-A-101 |
| Temp Cycling | -65°C to +150°C, 15 min. dwell, 10 up to 100 cycles. MIL-STD-750 (Method 1051) EIA/JEDEC, JESD22-A104 |
| Biased Temp & Humidity | 52 V_{DC} (+85°C) 85%RH, 504 up to 1008 hrs. EIA/JEDEC, JESD22-A-101 |
| High Temp Storage | +150°C 1008 hrs. MIL-STD-750 (Method 1031) JEDEC, JESD22-A-101 |
| Low Temp Storage | -65°C, 1008 hrs. |
| Thermal Shock | 0°C to +100°C, 5 min. dwell, 10 sec. transfer, 10 cycles. MIL-STD-750 (Method 1056) JEDEC, JESD22-A-106 |
| Autoclave (Pressure Cooker Test) | +121°C, 100%RH, 2atm, 24 up to 168 hrs. EIA/JEDEC, JESD22-A-102 |
| Resistance to Solder Heat | +260°C, 30 secs. MIL-STD-750 (Method 2031) |
| Moisture Sensitivity Level | 85%RH, +85°C, 168 hrs., 3 reflow cycles (+260°C Peak). JEDEC-J-STD-020, Level 1 |

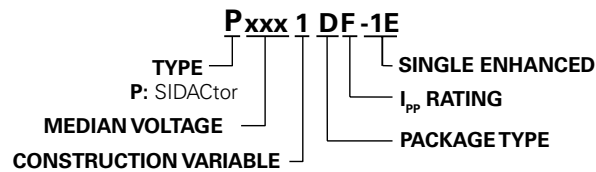
Dimensions — MS-012



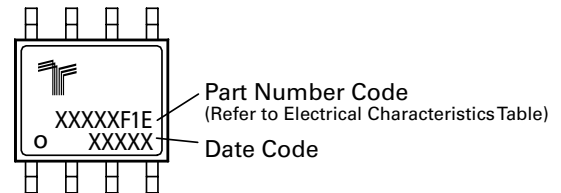
| Dimension | Inches | | Millimeters | |
|-----------|------------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.053 | 0.069 | 1.35 | 1.75 |
| A1 | 0.004 | 0.010 | 0.10 | 0.25 |
| A2 | 0.043 | 0.065 | 1.25 | 1.65 |
| B | 0.012 | 0.020 | 0.31 | 0.51 |
| C | 0.007 | 0.010 | 0.17 | 0.25 |
| D | 0.189 | 0.197 | 4.80 | 5.00 |
| E | 0.228 | 0.244 | 5.80 | 6.20 |
| E1 | 0.150 | 0.157 | 3.80 | 4.00 |
| e | 0.050 BSC* | | 1.27 BSC* | |
| L | 0.016 | 0.050 | 0.40 | 1.27 |

* BSC = Basic Spacing between Centers

Part Numbering



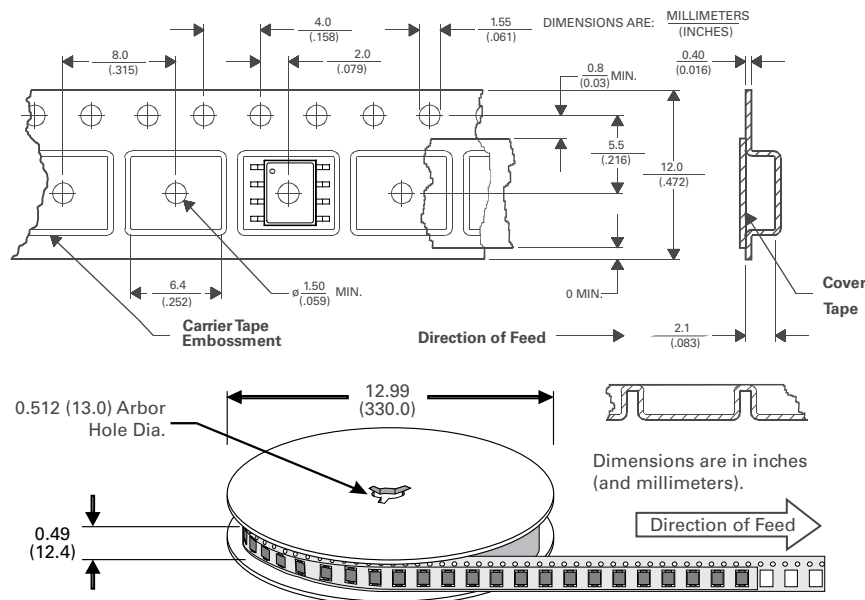
Part Marking



Packing Options

| Package Type | Description | Quantity | Added Suffix | Industry Standard |
|--------------|--|----------|--------------|-------------------|
| D | MS-012 SMT 8-pin SOIC Tape and Reel Pack | 2500 | N/A | EIA-481-D |

Tape and Reel Specifications — MS-012



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