

Figure 51. Duty Cycle Measurement.

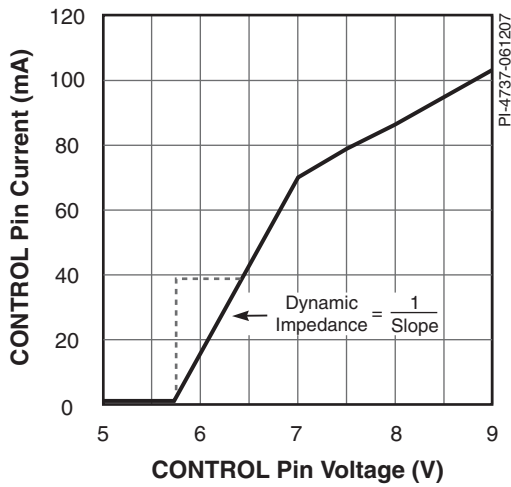


Figure 52. CONTROL Pin I-V Characteristic.

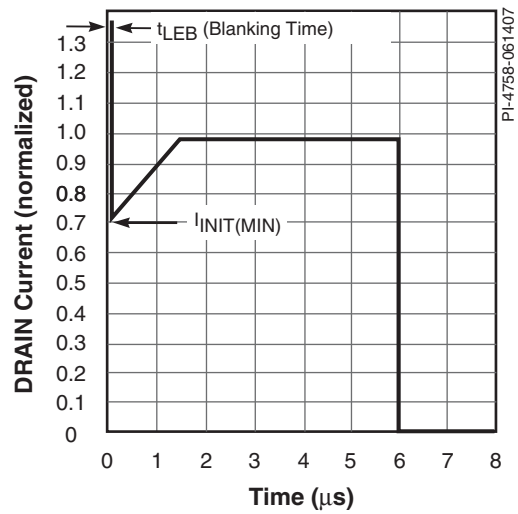


Figure 53. Drain Current Operating Envelope.

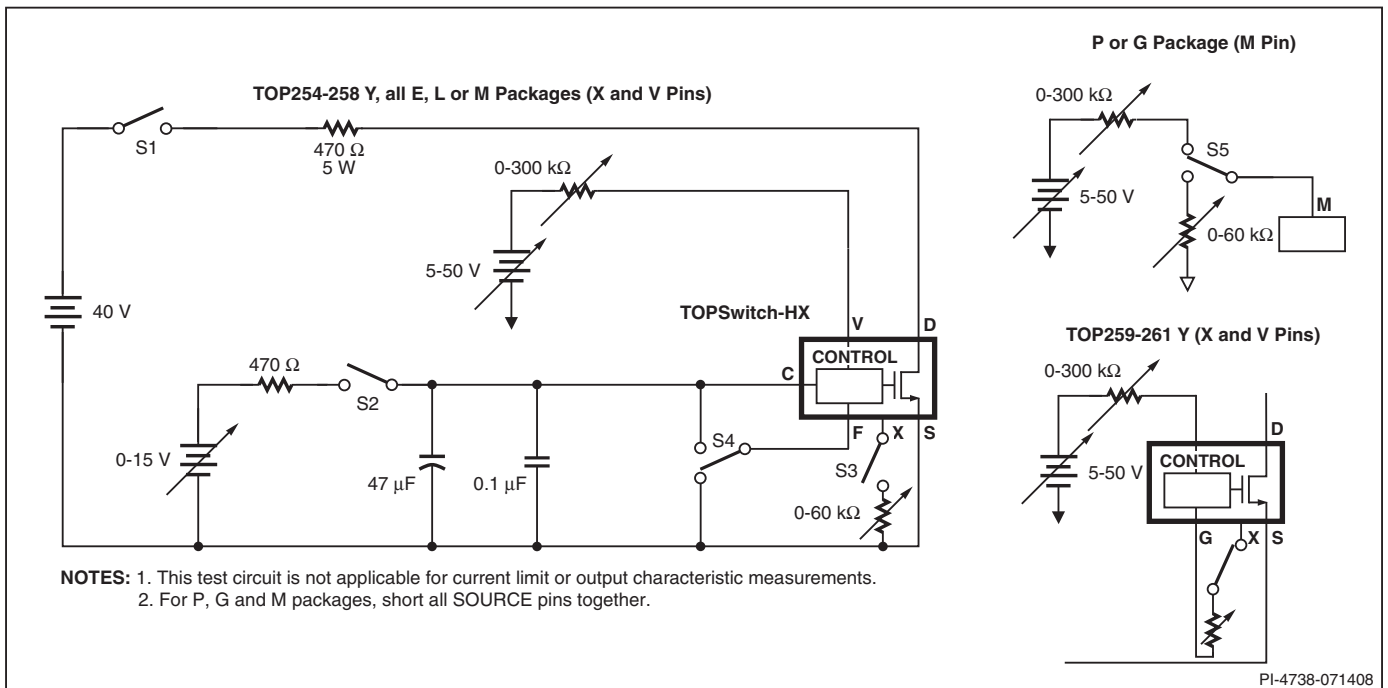


Figure 54. TOPSwitch-HX General Test Circuit.

Typical Performance Characteristics

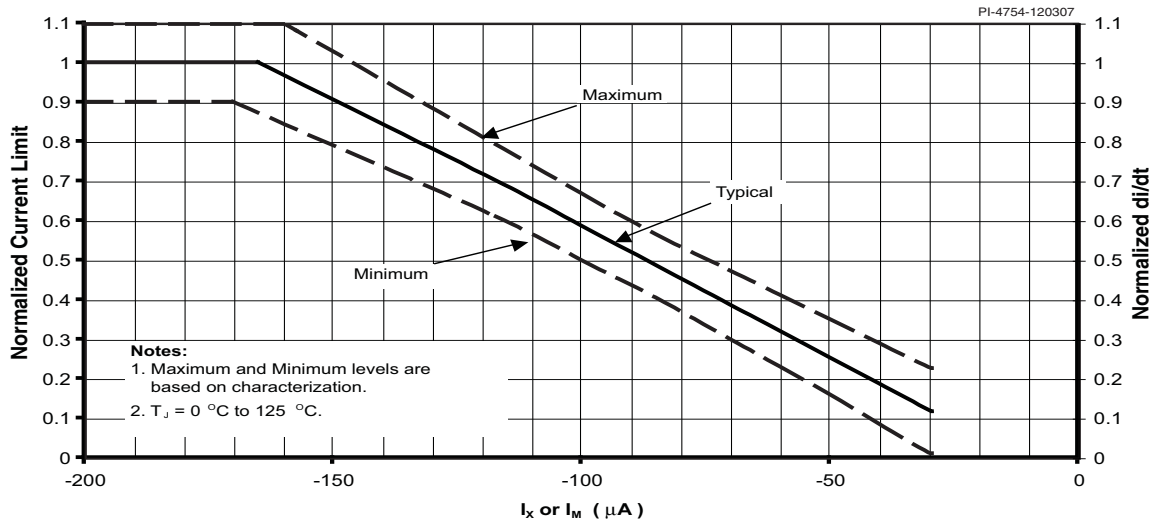


Figure 55a. Normalized Current Limit vs. X or M Pin Current.

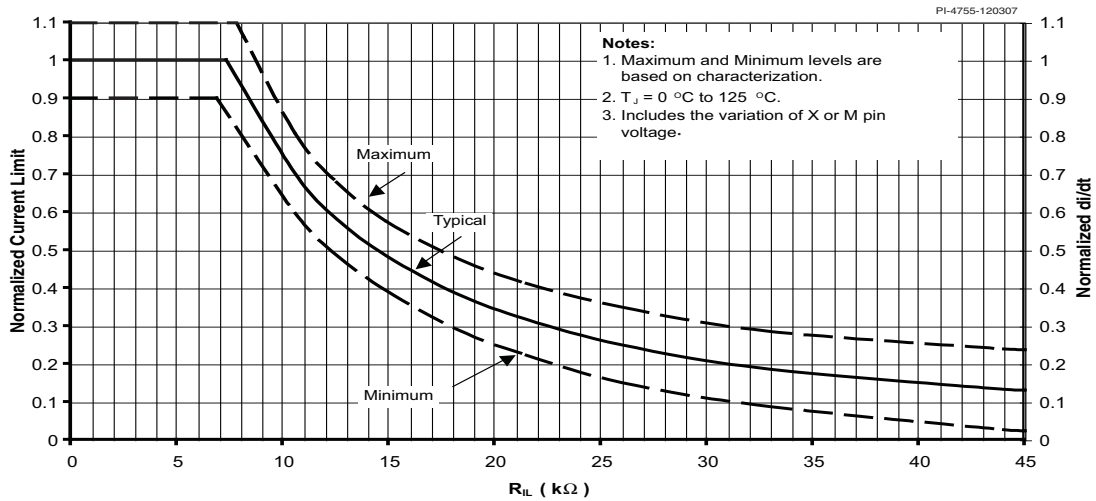


Figure 55b. Normalized Current Limit vs. External Current Limit Resistance.

Typical Performance Characteristics (cont.)

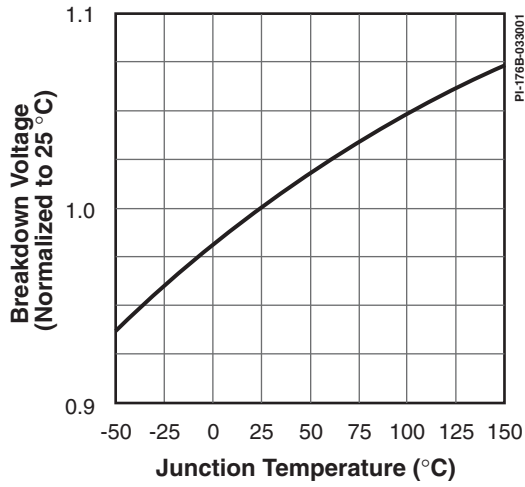


Figure 56. Breakdown Voltage vs. Temperature.

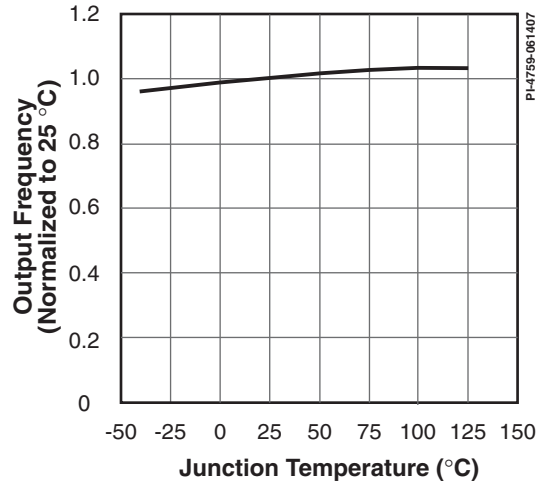


Figure 57. Frequency vs. Temperature.

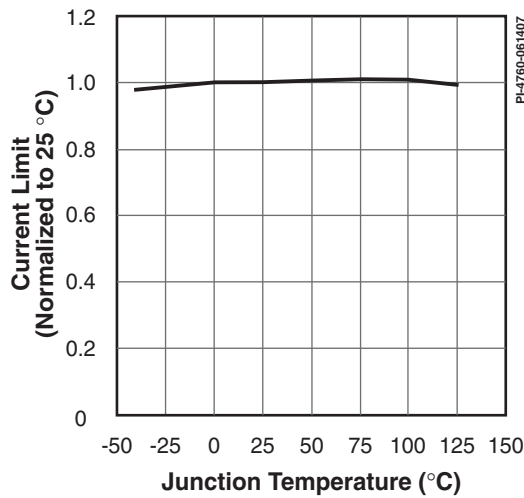


Figure 58. Internal Current Limit vs. Temperature.

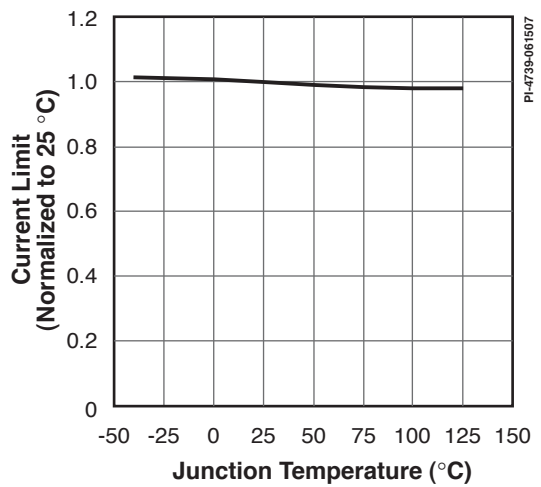


Figure 59. External Current Limit vs. Temperature with  $R_L = 10.5 \text{ k}\Omega$ .

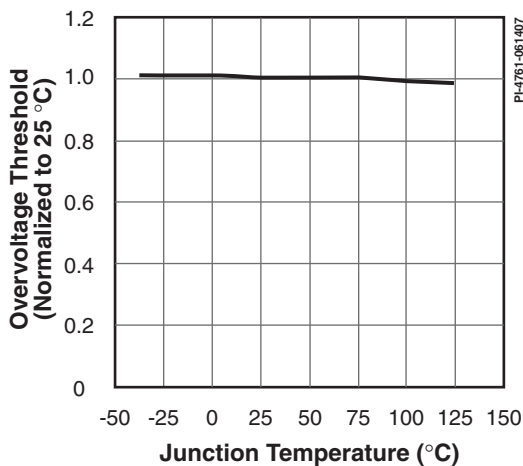


Figure 60. Overvoltage Threshold vs. Temperature.

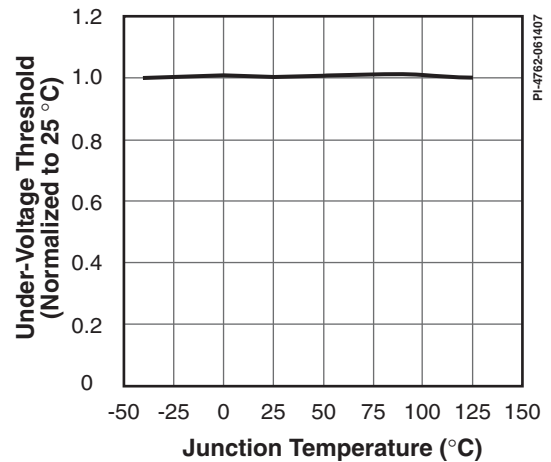


Figure 61. Undervoltage Threshold vs. Temperature.

Typical Performance Characteristics (cont.)

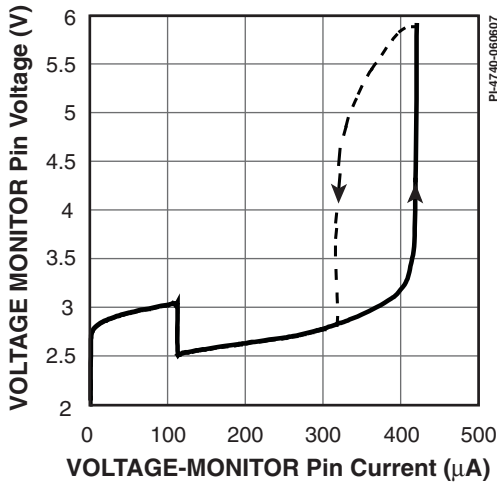


Figure 62a. VOLTAGE-MONITOR Pin vs. Current.

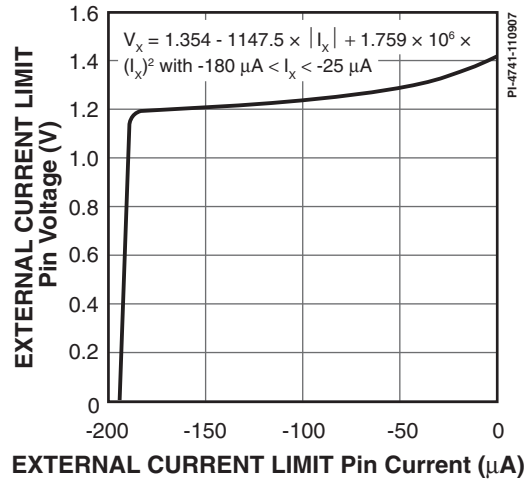


Figure 62b. EXTERNAL CURRENT LIMIT Pin Voltage vs. Current.

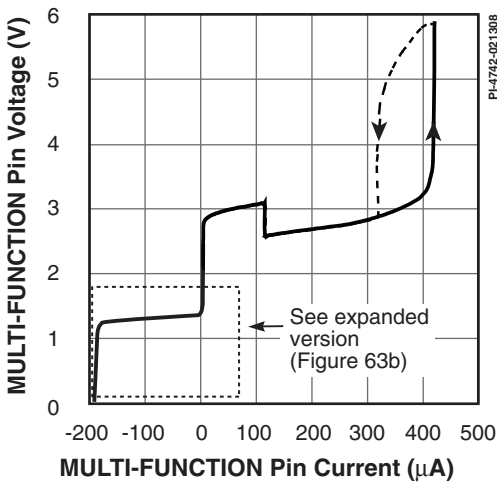


Figure 63a. MULTI-FUNCTION Pin Voltage vs. Current.

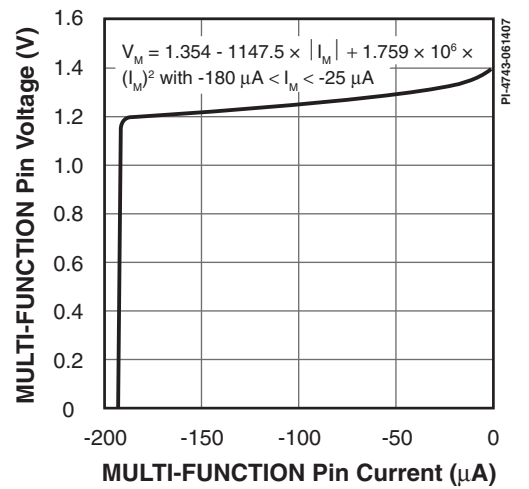


Figure 63b. MULTI-FUNCTION Pin Voltage vs. Current (Expanded).

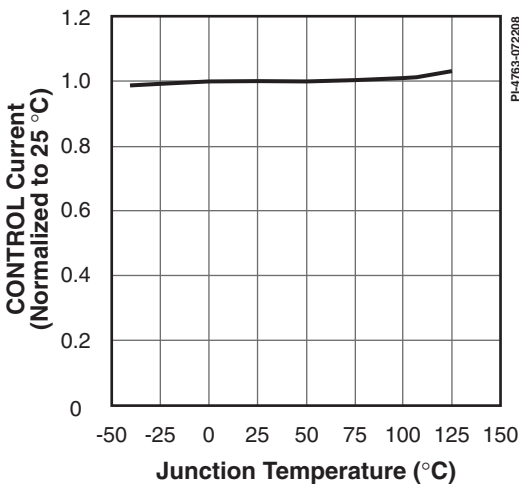


Figure 64. Control Current Out at 0% Duty Cycle vs. Temperature.

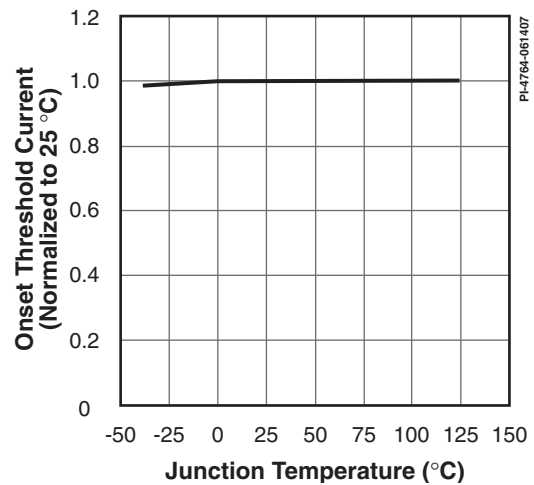


Figure 65. Maximum Duty Cycle Reduction Onset Threshold Current vs. Temperature.

Typical Performance Characteristics (cont.)

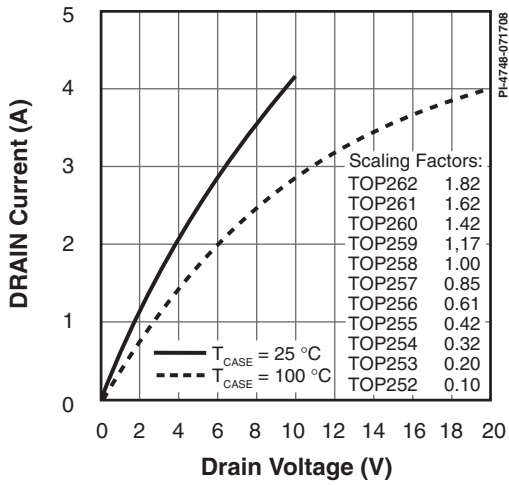


Figure 66. Output Characteristics.

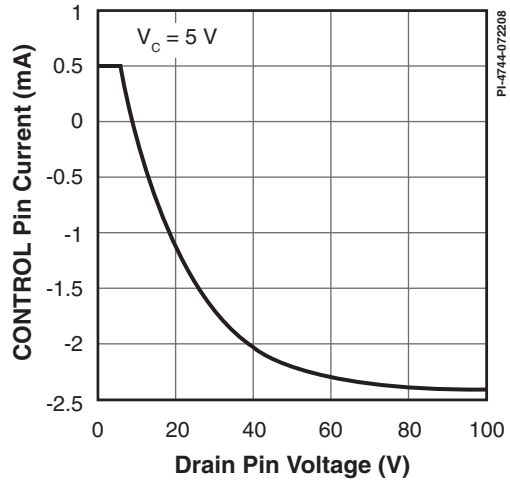


Figure 67.  $I_c$  vs. DRAIN Voltage.

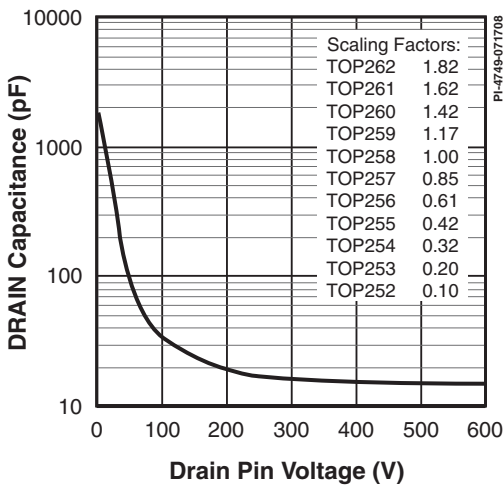


Figure 68.  $C_{OSS}$  vs. DRAIN Voltage.

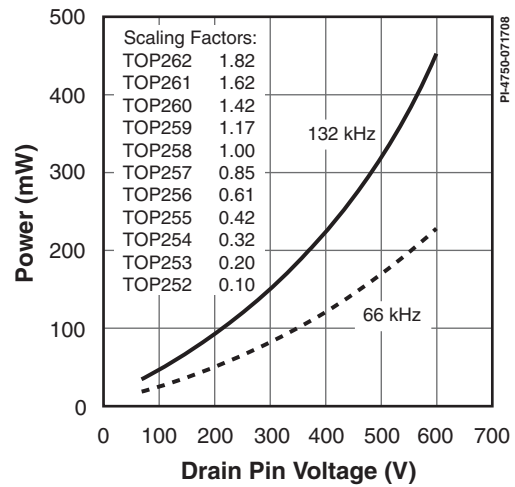


Figure 69. DRAIN Capacitance Power.

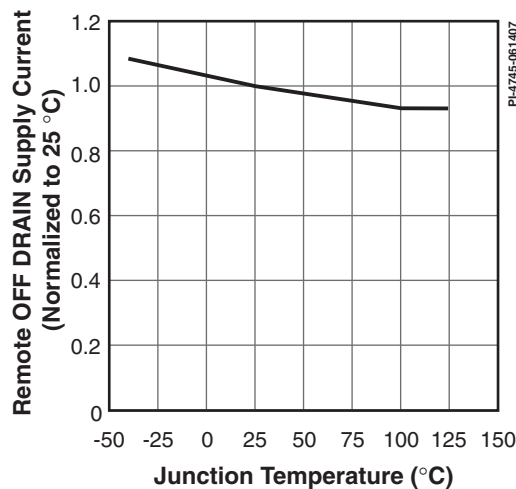
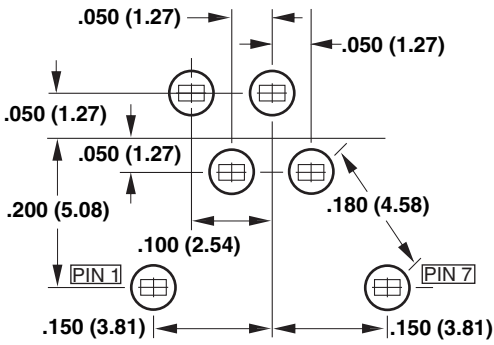
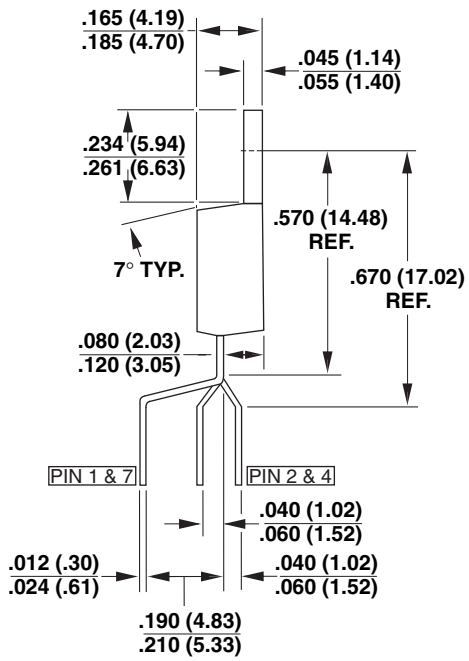
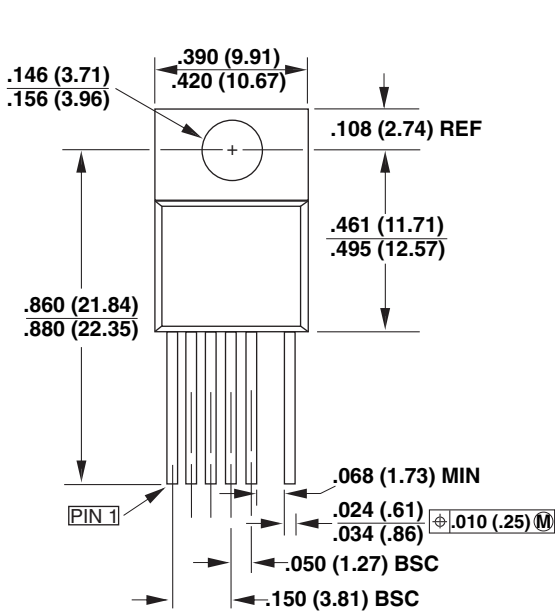


Figure 70. Remote OFF DRAIN Supply Current vs. Temperature.

TO-220-7C

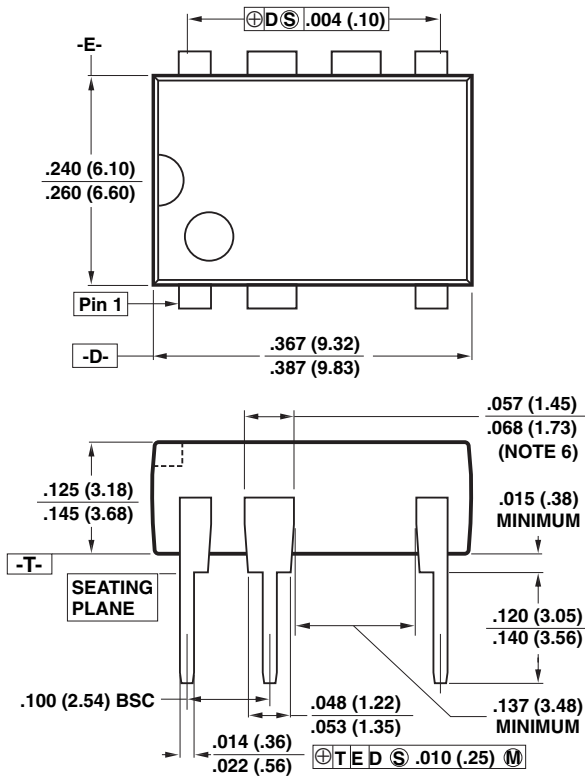


Y07C MOUNTING HOLE PATTERN

- Notes:
1. Controlling dimensions are inches. Millimeter dimensions are shown in parentheses.
  2. Pin numbers start with Pin 1, and continue from left to right when viewed from the front.
  3. Dimensions do not include mold flash or other protrusions. Mold flash or protrusions shall not exceed .006 (.15mm) on any side.
  4. Minimum metal to metal spacing at the package body for omitted pin locations is .068 in. (1.73 mm).
  5. Position of terminals to be measured at a location .25 (6.35) below the package body.
  6. All terminals are solder plated.

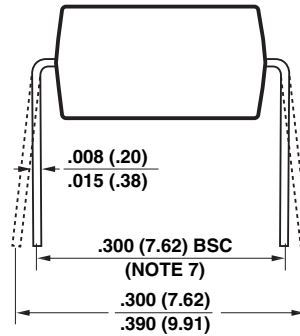
PI-2644-122004

### DIP-8C



**Notes:**

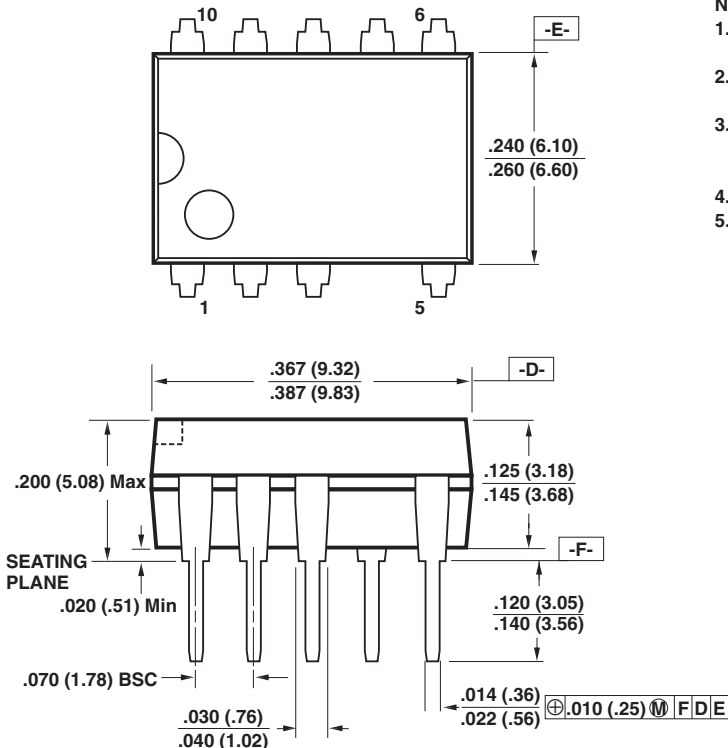
1. Package dimensions conform to JEDEC specification MS-001-AB (Issue B 7/85) for standard dual-in-line (DIP) package with .300 inch row spacing.
2. Controlling dimensions are inches. Millimeter sizes are shown in parentheses.
3. Dimensions shown do not include mold flash or other protrusions. Mold flash or protrusions shall not exceed .006 (.15) on any side.
4. Pin locations start with Pin 1, and continue counter-clockwise to Pin 8 when viewed from the top. The notch and/or dimple are aids in locating Pin 1. Pin 3 is omitted.
5. Minimum metal to metal spacing at the package body for the omitted lead location is .137 inch (3.48 mm).
6. Lead width measured at package body.
7. Lead spacing measured with the leads constrained to be perpendicular to plane T.



**P08C**

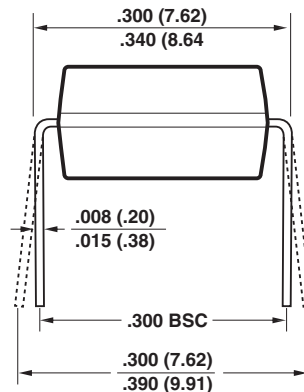
PI-3933-100504

### SDIP-10C



**Notes:**

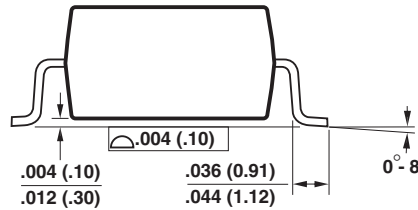
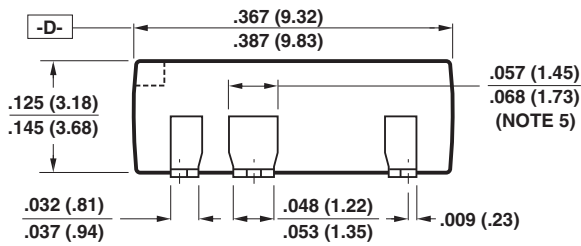
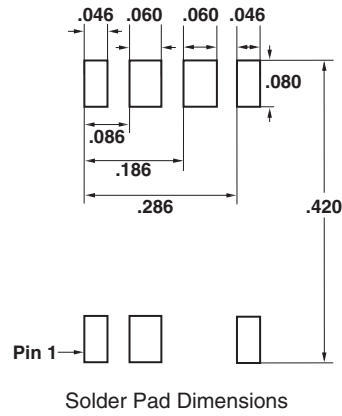
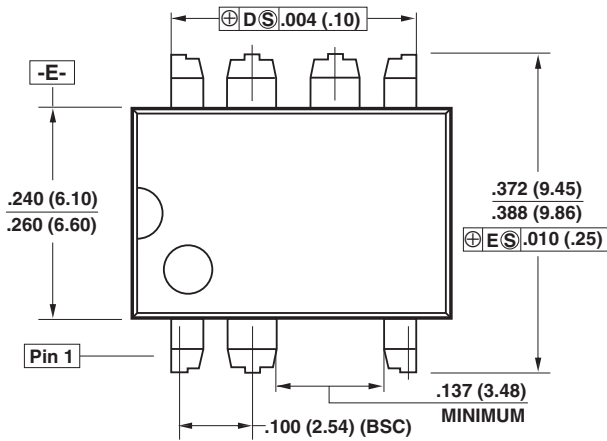
1. Package dimensions conform to JEDEC specification MS-019.
2. Controlling dimensions are inches. Millimeter sizes are shown in parentheses.
3. Dimensions shown do not include mold flash or other protrusions. Mold flash or protrusions shall not exceed .006 (.15) on any side.
4. D, E and F are reference datums.
5. Dimensioning and tolerancing conform to ASME Y14.5M-1994.



**P10C**

PI-4648-041107

SMD-8C



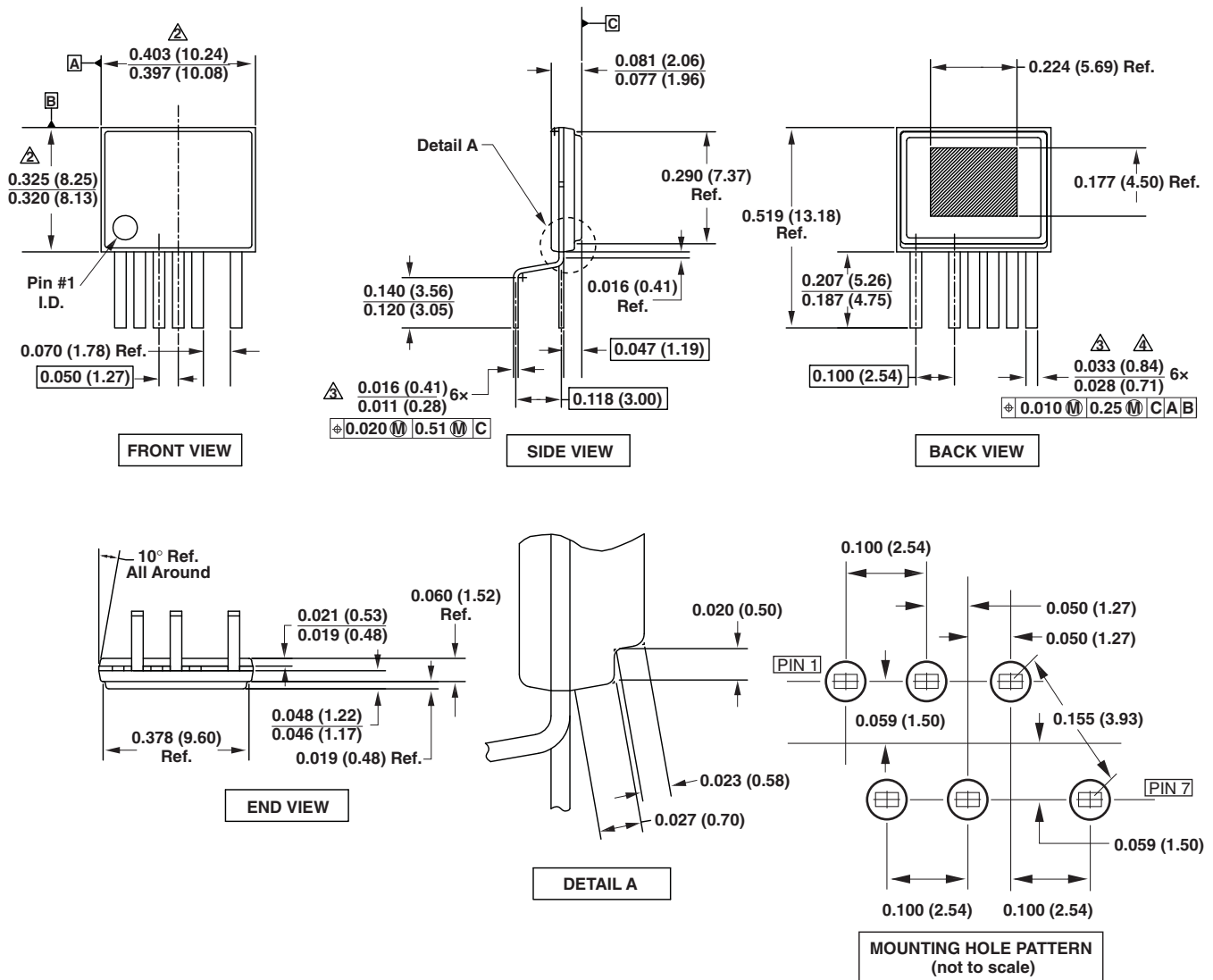
Notes:

1. Controlling dimensions are inches. Millimeter sizes are shown in parentheses.
2. Dimensions shown do not include mold flash or other protrusions. Mold flash or protrusions shall not exceed .006 (.15) on any side.
3. Pin locations start with Pin 1, and continue counter-clockwise to Pin 8 when viewed from the top. Pin 3 is omitted.
4. Minimum metal to metal spacing at the package body for the omitted lead location is .137 inch (3.48 mm).
5. Lead width measured at package body.
6. D and E are referenced datums on the package body.

G08C

PI-4015-013106

eSIP-7C (E Package)



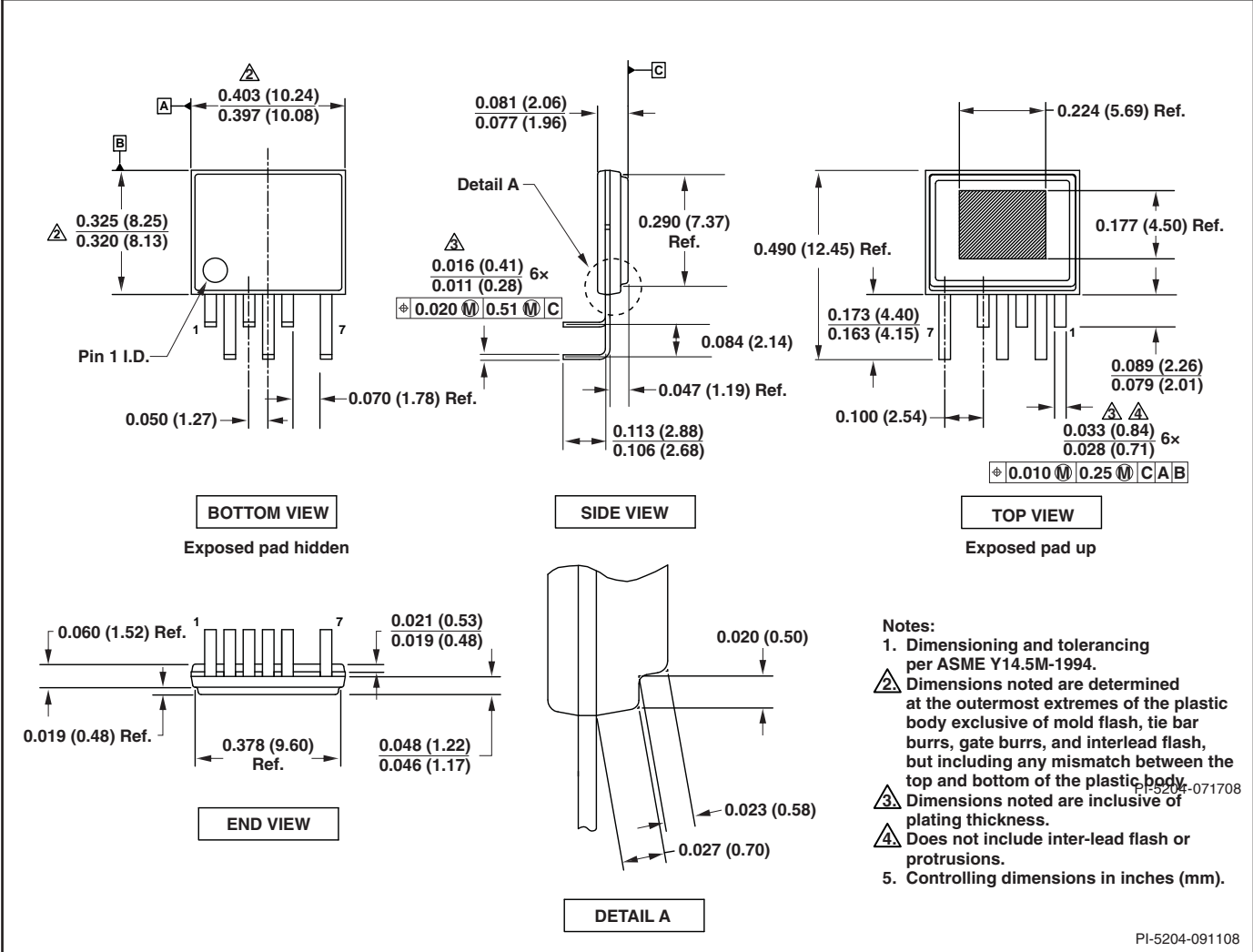
Notes:

- 1. Dimensioning and tolerancing per ASME Y14.5M-1994.
- 2. Dimensions noted are determined at the outermost extremes of the plastic body exclusive of mold flash, tie bar burrs, gate burrs, and interlead flash, but including any mismatch between the top and bottom of the plastic body.

- 3. Dimensions noted are inclusive of plating thickness.
- 4. Does not include inter-lead flash or protrusions.
- 5. Controlling dimensions in inches (mm).

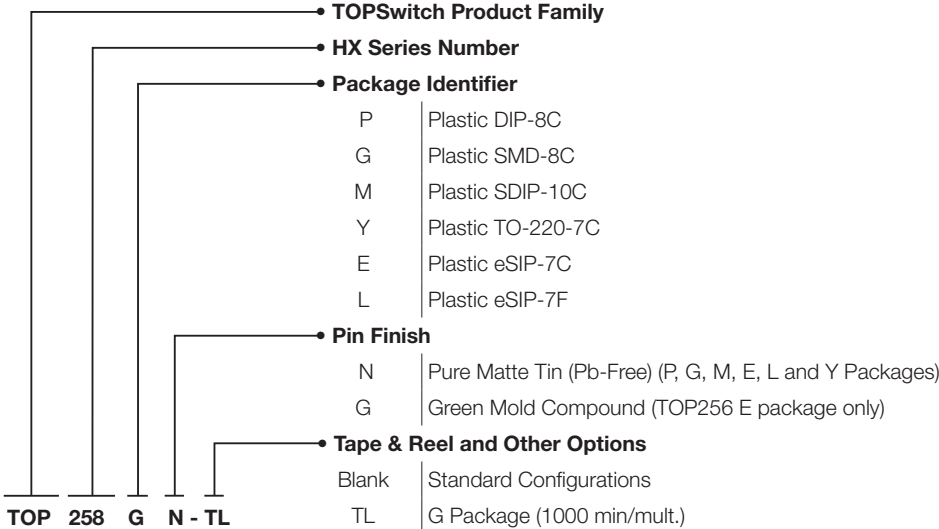
PI-4917-080808

**eSIP-7F (L Package)**



PI-5204-091108

**Part Ordering Information**



Revision	Notes	Date
B	Data sheet release	02/08
C	Added L package and TOP262	07/08
D	Changed eSIP-7E to eSIP-7F. Added detail to PI-4917 and PI-5204.	08/08
E	Released TOP255-259LN and TOP262EN parts.	10/08
F	Added note for TOP256 P halogen free part availability	01/09

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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