

TISP4C0xxL1N Overvoltage Protector Series

BOURNS®

Absolute Maximum Ratings, $T_A = 25\text{ }^\circ\text{C}$ (Unless Otherwise Noted)

Rating	Symbol	Value	Unit
Repetitive peak off-state voltage	V_{DRM}	'4C015L1N ±8 '4C020L1N ±12 '4C025L1N ±16 '4C035L1N ±24	V
Non-repetitive peak impulse current (see Notes 1, 2 and 3) 8/20 μs (IEC 61000-4-5, 1.2/50 μs voltage, 8/20 current combination wave generator) 10/1000 μs (GR-1089-CORE, 10/1000 μs voltage wave shape)	I_{PPSM}	±30 ±18	A
Junction temperature	T_J	-40 to +150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-65 to +150	$^\circ\text{C}$

- NOTES: 1. Initially the device must be in thermal equilibrium with $T_J = 25\text{ }^\circ\text{C}$.
 2. The surge may be repeated after the device returns to its initial conditions.
 3. Rated currents only apply if pins 1 & 5 (Tip) are connected together and pins 3 & 4 (Ring) are connected together.

Electrical Characteristics, $T_A = 25\text{ }^\circ\text{C}$ (Unless Otherwise Noted)

Parameter	Test Conditions	Min	Typ	Max	Unit
I_{DRM} Repetitive peak off-state current	$V_D = V_{\text{DRM}}$			±1	μA
$V_{(\text{BO})}$ Breakover voltage	$dv/dt = \pm 250\text{ V/ms}$, $R_{\text{SOURCE}} = 300\ \Omega$			'4C015L1N ±15 '4C020L1N ±20 '4C025L1N ±25 '4C035L1N ±35	V
I_H Holding current	$I_T = \pm 5\text{ A}$, $di/dt = \pm 30\text{ mA/ms}$		'4C015L1N ±50 '4C020L1N ±20 '4C025L1N ±50 '4C035L1N ±50		mA
C_O Off-state capacitance	$f = 1\text{ MHz}$, $V_d = 1\text{ V rms}$, $V_D = 2\text{ V}$			'4C015L1N 15 '4C020L1N 15 '4C025L1N 15 '4C035L1N 15	pF
ΔC Delta-capacitance	$f = 1\text{ MHz}$, $V_d = 1\text{ V rms}$, $V_D = 1\text{ V to } V_{\text{DRM}}$		'4C015L1N 3 '4C020L1N 3.5 '4C025L1N 3.5 '4C035L1N 4.5		pF

Parameter Measurement Information

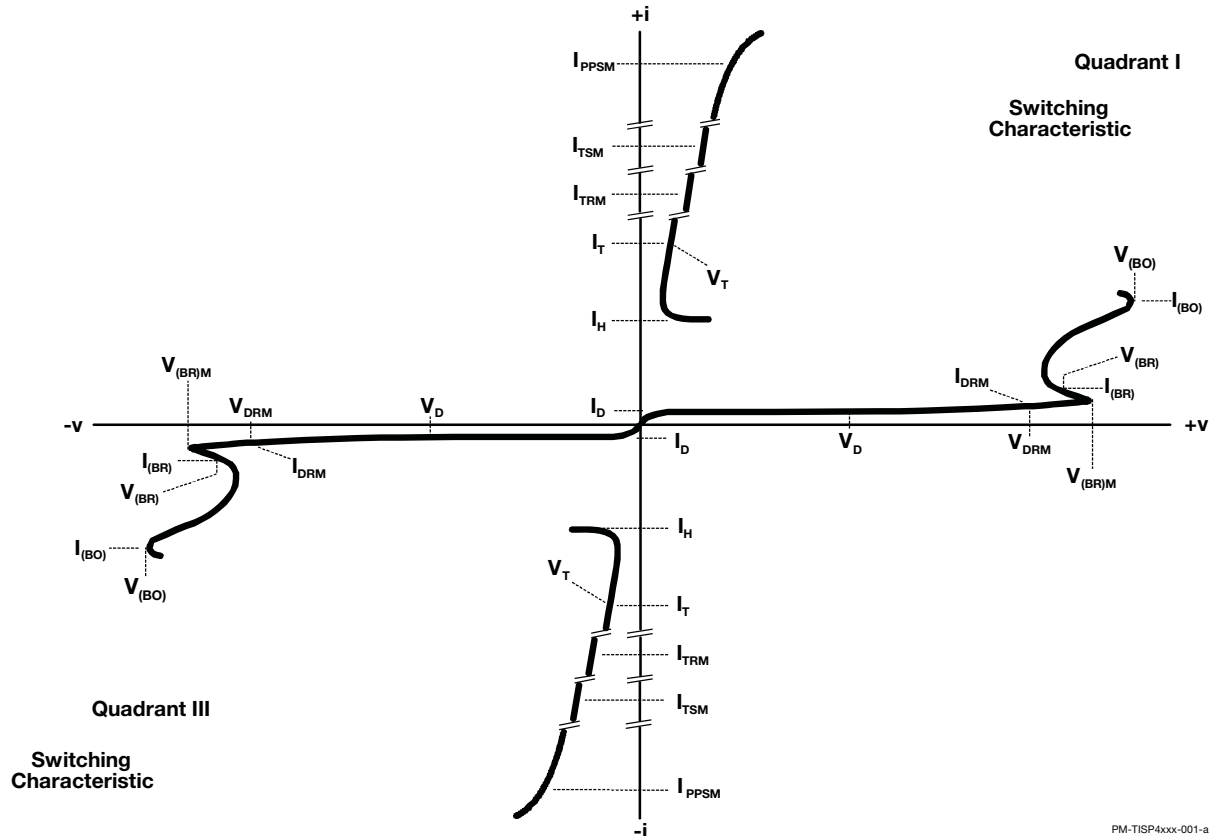
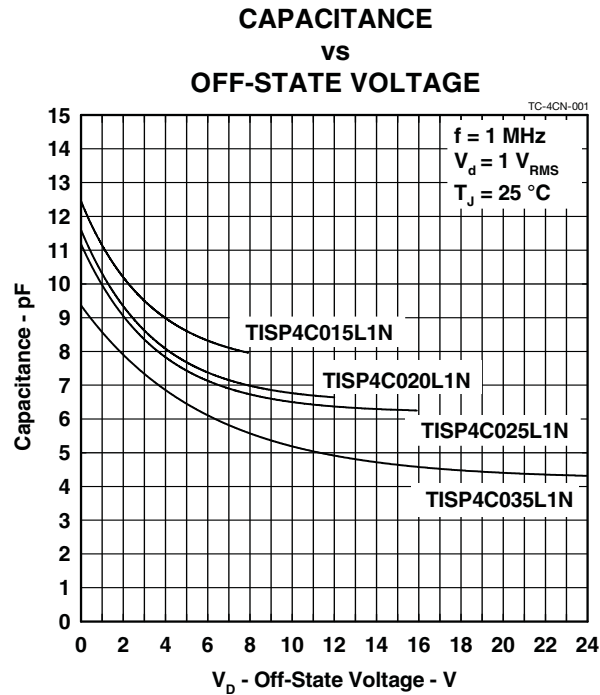


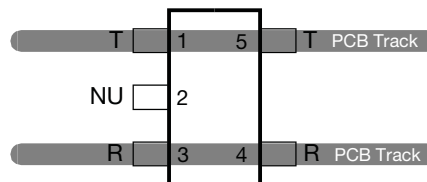
Figure 1. Voltage-Current Characteristic for Tip and Ring Terminals
All Measurements are Referenced to the Ring Terminal

PM-TISP4xxx-001-a

Typical Characteristics



Recommended PCB Layout



MD-SOT223-5-xxx

Figure 3.

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The Americas:	+1-951-781-5500	+1-951-781-5700
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