

# RESISTIVE POWER TERMINATORS

## PTSM, PTWB SERIES

The PTSM and PTWB series of Thin Film high power resistor terminators provide operating power to 2 Watts. This is accomplished with Mini-Systems proprietary high current density Tantalum Nitride resistor film. Offered in top contact, surface mountable half wrap, and full wrap terminations.

### PTWB SERIES WIRE BONDABLE

SERIES	L	W	TOLERANCE	OHMIC VALUE	POWER RATING @ 70°C; ALUMINA
PTWB 110	0.037" x	0.017"	±0.003"	2Ω - 1KΩ	500mW
PTWB 112	0.050" x	0.050"	±0.003"	2Ω - 1KΩ	1W
PTWB 115	0.050" x	0.025"	±0.003"	2Ω - 1KΩ	500mW
PTWB 120	0.100" x	0.050"	±0.003"	2Ω - 1KΩ	2W
PTWB 121	0.100" x	0.100"	±0.003"	2Ω - 1KΩ	2W
PTWB 122	0.020" x	0.016"	±0.003"	2Ω - 1KΩ	250mW

### PTSM SERIES SURFACE MOUNT

SERIES	L	W	TOLERANCE	OHMIC VALUE	POWER RATING @ 70°C; ALUMINA
PTSM 1	0.040" x	0.020"	±0.003"	2Ω - 1KΩ	500mW
PTSM 2	0.035" x	0.035"	±0.003"	2Ω - 1KΩ	1W
PTSM 3	0.075" x	0.050"	±0.003"	2Ω - 1KΩ	1W
PTSM 4	0.050" x	0.050"	±0.003"	2Ω - 1KΩ	1W
PTSM 5	0.126" x	0.063"	±0.003"	2Ω - 1KΩ	2W
PTSM 6	0.100" x	0.050"	±0.003"	2Ω - 1KΩ	2W
PTSM 7	0.020" x	0.020"	±0.003"	2Ω - 1KΩ	250mW

### COMMON SERIES DATA

SUBSTRATE MATERIAL	99.6% ALUMINA STD.; BeO OPTIONAL FOR HIGHER POWER
TOLERANCES	1%, 2%, 5%, 10%
T.C.R.	±150ppm (TaN)
CURRENT NOISE	-20dB TYPICAL
OPERATING VOLTAGE	100 V MAX.
SHORT TERM OVERLOAD	2.5X RATED POWER, 25°C, 5 SEC., ±0.25% MAX. ΔR/R: 0.1% MSI TYPICAL
HIGH TEMP EXPOSURE	150°C, 100 HRS., ±0.25% MAX. ΔR/R: 0.03% MSI TYPICAL
THERMAL SHOCK	MIL-STD 202, METHOD 107F, ±0.25% MAX. ΔR/R: 0.1% MSI TYPICAL
MOISTURE RESISTANCE	MIL-STD 202, METHOD 106, ±0.5% MAX. ΔR/R: 0.1% MSI TYPICAL
STABILITY	1000 HRS., 70°C, 125mW, ±0.5% MAX. ΔR/R: 0.1% MSI TYPICAL
OPERATING TEMP RANGE	-55°C TO +150°C
FREQUENCY	DC THRU 20 GHz
STRAY DISTRIBUTED CAPACITANCE	ALUMINA 0.06pF

### PART NUMBER DESIGNATION

XXXX	X	AT	XXXXX	X	X
SERIES	STYLE	MATERIAL	OHMIC VALUE	TOLERANCE	OPTION DESIGNATOR (If Required)
PTWB	110, 112 115, 120 121, 122	AT = Alumina / TaN BT = BeO / TaN	5-Digit Number: 1st 4 Digits Are Significant With "R" As Decimal Point When Required. 5th Digit Represents Number of Zeros.	F = 1% G = 2% J = 5% K = 10%	***G = Gold Bond Pads. **GB = Gold Back **T = Solder Tinned ** T3 = Leadfree Solder Tinned *HWU= Half-Wrap No Solder *WAU= Wrap Around No Solder *HWT= Half-Wrap Solder Tinned *HWT3= Half-Wrap Leadfree Solder Tinned *WAT= Wrap Around Solder Tinned *WAT3= Wrap Around Leadfree Solder Tinned
PTSM	1,2 3,4 5,6 7				

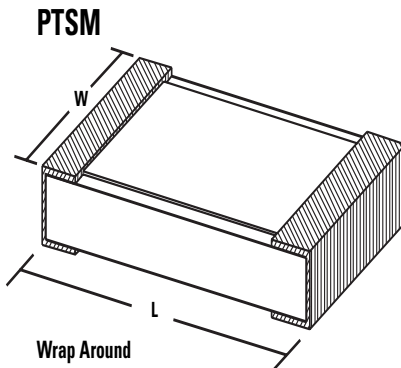
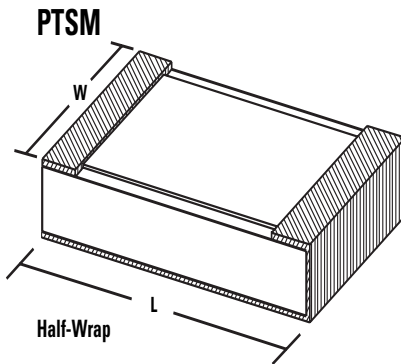
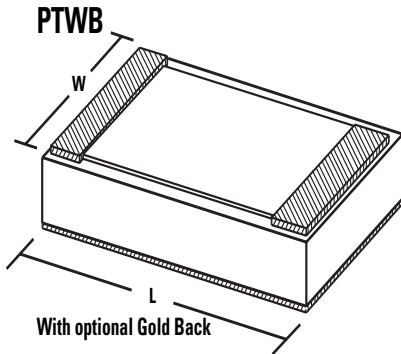
EXAMPLES: PTWB 110AT-100R0F-GB = 100Ω, ±1% Tol., Gold Back, Wire Bondable.  
PTSM 1AT-2R000K-HWT = 2Ω, ±10% Tol., Half-Wrap, Solder Tinned.

\* PTSM Style only.

\*\* PTWB Style only.

\*\*\* To be used when no other option is required. PTWB only.  
Solder option applies to all conductor surfaces

CHIP RESISTORS



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