MIL-STD-188-125-1 ACCEPTANCE PCI TESTING SUMMARY
MPE DS33605C HEMP Filter (3X 32 A, 250 VAC)

Jaxon Engineering and Maintenance (JEM) has performed MIL-STD-188-125-1 acceptance PCI testing on multiple production units of HEMP PPD (**P**oint-of-Entry **P**rotective **D**evice) PN DS33605C manufactured by MPE of Liverpool, UK. The DS33605C is a three-line filter; each of the three lines is individually rated at 32 A and 250 VAC with surge protection provided by a single CKE Z60M431 MOV (metal-oxide varistor).

The MPE DS33605C was classified as an unrestricted intrasite commercial power line PPD as defined in MIL-STD-188-125-1. Accordingly, each line of each PPD was tested against the short (E1) pulse transient waveform detailed in MIL-STD-188-125-1 using a clean-side line-to-ground dummy resistive load of 2.0 Ω. The units tested met all applicable performance requirements given in MIL-STD-188-125-1. There was no evidence of damage or degradation to any of the units tested resulting from application of the short pulse transients. Furthermore, the peak, derivative and root action norms of the measured short pulse residual current waveforms were well below the applicable limits given in MIL-STD-188-125-1 as highlighted below.

SHORT PULSE NORM	LIMIT	WORST CASE
Peak Current	10 A	3.4 A
Peak di/dt	1E7 A/sec	6.5E5 A/sec
Root Action	1.6E-1 A√sec	1.2E-2 A√sec

DS33605C – MIL-STD-188-125-1 Acceptance PCI – Worst Case E1 Residual Current Norms

A summary of the maximum residual current peak, derivative and root action norms at each injection level from the entire population of DS33605C units tested is provided below.

DS33605C		INJECTION LEVEL (A)						
NORM and LIMIT		50	125	250	500	1000	1750	2500
MAX PEAK	10 A	1.0	1.5	2.0	2.5	3.1	3.0	3.4
MAX DERIVATIVE	1E7 A/sec	2.4E+05	3.5E+05	4.2E+05	5.0E+05	5.8E+05	5.9E+05	6.5E+05
MAX ROOT ACTION	1.6E-1 A√sec	3.8E-03	5.5E-03	7.1E-03	9.9E-03	1.2E-02	1.1E-02	1.2E-02

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