

PM1125-WB

Change of Order Code

Change of Functional and Performance Parameters

PCN Overview

Affected products	PM1125-WB Silicon Photomultiplier Previous version of the product is related to PM1125-WB-B0, new revision the the product is PM1125-WB-C0
Original issue date	March 24, 2020
Type of change notification	Product datasheet
Expected first ship dat	March 24, 2020
Last date to buy pre-change product	As long as stock lasts
Reference documents	PM1125-WB-B0 and PM1125-WB-C0 datasheets

Reason for PCN

Due to improvements in the SiPM chip technology there is a change in the SiPM functional parameters. The package and physical dimensions remain unchanged.

PCN Summary

Following table lists only the differences between the previous PM1125-WB-B0 and the new revision PM1125-WB-C0. Parameters not listed here remain unchanged.

Parameter	PM1125-WB-B0	PM1125-WB-C0
Breakdown Voltage (V_{BD}) at 21°C	min. 25.1, max. 25.7 (typ. 25.4), ± 0.300 V	min. 23.5, max. 25.5 ± 0.300 V
Dark Current (μA)	0.025 (max. 0.04) @ 2.5 V_{OV} 0.125 (max. 0.2) @ 5.0 V_{OV}	0.011 (max. 0.04) @ 2.5 V_{OV} 0.064 (max. 0.11) @ 5.0 V_{OV}
Crosstalk Probability (%)	6 @ 2.5 V_{OV} 23 @ 5.0 V_{OV}	7 @ 2.5 V_{OV} 26 @ 5.0 V_{OV}
Terminal Capacitance (pF)	90	125
Recovery Time (ps)	30 (at 5 Ω load) 47 (at 50 Ω load)	28 (at 1 Ω load) 33 (at 50 Ω load)
Signal Rise Time (ps)	< 1000	110

Customer Impact

Customers who have used PM1125-WB-B0 in their design do not need to change anything regarding PCB design or footprint, as the package remains unchanged.

Regarding the operation of the new revision PM1125-WB-C0, the lower breakdown voltage is typically not a problem for most customers. The min./max. breakdown voltage spread of ± 0.300 V per reel remains unchanged.

The improvement/lowering of the dark current, improvement in recovery time, the slightly higher crosstalk probability and higher terminal capacitance for the new revision PM1125-WB-C0 is typically not a concern for the vast majority of customers that are already using the previous PM1125-WB-B0. The signal rise time has been specified more precise.

Additional Information

All datasheets with full specification of PM1125-WB-B0 and PM1125-WB-C0 are available at www.ketek.net/sipm-downloads

The documentation for PM1125-WB-B0 is available in the category "Discontinued Products".

Revision History

Revision and Date	Changes
KETEK-SiPM-PCN-2020-01 March 2020	Initial release