QUALIFICATION PLAN SUMMARY

PCN #: MAAN-22RKFW820

Date:

February 11, 2025

Qualification of Microchip Technology Colorado – Fab 5 (MCSO) as a new fabrication site for multiple device families of DMOS2.5 (63K, 6K, 6FK, 6GK, 6HK) technology available in various packages.

Purpose: Qualification of Microchip Technology Colorado – Fab 5 (MCSO) as a new fabrication site for multiple device families of DMOS2.5 (63K, 6K, 6FK, 6GK, 6HK) technology available in various packages.

CCB No.: 7428.005 and 7364.002

Misc.	Assembly site	CRTK
	BD Number	D-000531 (A-073537) D-000523 (A-073535)
	MP Code (MPC)	630039A2XR00 630039A2XK00
	Part Number (CPN)	TP0620N3-G (2 lots) TN0620N3-G (1 lot)
	Assembly Shipping Media (T/R, Tube/Tra	BAG
	Base Quantity Multiple (BQM)	1000
	Reliability Site	MTAI
Lead-Frame	Paddle size	140 x 100 mils
	Material	A194
	DAP Surface Prep	Spot Ag
	Treatment	Yes
	Process	Stamped
	Lead-lock	No
	Part Number	TO03NH2105
	Lead Plating	Matte Tin
	Strip Size	254.05+/-0.15mm
	Strip Density	X50
Bond Wire	Material	Au
Die Attach	Part Number	84-1LMISR4
	Conductive	Yes
MC	Part Number	CEL8240GS
PKG	Package Type	TO-92
	Pin/Ball Count	3L

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	30 bonds from a min. 5 devices.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	
HTSL (High Temp Storage Life)	JESD22-A103. +175 C for 504 hours or 150°C for 1008 hrs. Electrical test pre and post stress at +25C.	45	5	1 3 (Cu wire qual)	50 150 (Cu wire qual)	0	10	
HAST	JESD22-A110. +130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	JESD22-A118. +130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs. Electrical test pre and post stress at +25°C	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104. -65°C to +150°C for 500 cycles. Electrical test pre and post stress at +25°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

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CCB No.: 7364.002

Test	Number of Lot/s	Sample Size (per lot)	Total Samples	Conditions
HTRB	3	77	231	1000HRS at +150°C
HTGB	3	77	231	1000HRS at +150°C
ESD/HBM	1	30	30	@ ±250V, ±500V, ±1KV & ±2KV