Table S1: ANOVA table for MRR.

Source	**DF**	**Adj SS**	**Adj MS**	**F**	**P**	**R^2**	**Remarks**
Model	4	10489.4	2622.35	49.91	0.000		$F_{standard}$ (0.05, 4,15) = 3.05 $F_{regression} > F_{standard}$ $F^{standard}$ (0.05,10,15) = 2.54 $F_{lack\ of\ fit} < F^{standard}$ Model is adequate with insignificant lack of fit.
Linear	3	10211.1					
Interaction	1	278.3					
Residual Error	15	788.2	52.54			91.15%	
Lack of Fit	10	533.9		1.05	0.511		
Error	5	254.3					
Total	19	11277.6					

Table S2: ANOVA table for EWR.

Source	**DF**	**Adj SS**	**Adj MS**	**F**	**P**	**R^2**	**Remarks**
Model	4	13.59	3.39	54.32	0.000		$F_{standard}$ (0.05, 4,15) = 3.05 $F_{regression} > F_{standard}$ $F^{standard}$ (0.05,10,15) = 2.54 $F_{lack\ of\ fit} < F^{standard}$ Model is adequate with insignificant lack of fit.
Linear	3	12.67	4.22				
Interaction	1	0.91					
Residual Error	15	0.88	0.59			92.22%	
Lack of Fit	10	0.75		2.9	0.126		
Error	5	0.13					
Total	19	14.47					

Table S3: ANOVA table for dimensional deviation.

Source	**DF**	**Adj SS**	**Adj MS**	**F**	**P**	**R^2**	**Remarks**
Model	5	16.817	3.36	46.56	0.000		$F_{standard}$ (0.05, 5,14) = 2.94 $F_{regression} > F_{standard}$
Linear	3	16.13					
Square	1	0.2862					

Interaction	1	0.392					$F^{standard}$ (0.05,9,14) = 2.65 $F_{lack\ of\ fit} < F^{standard}$ Model is adequate with insignificant lack of fit.
Residual Error	14	1.011	0.072			92.3	
Lack of Fit	9	0.906		2.29	0.035		
Error	5	0.104					
Total	19	17.829					

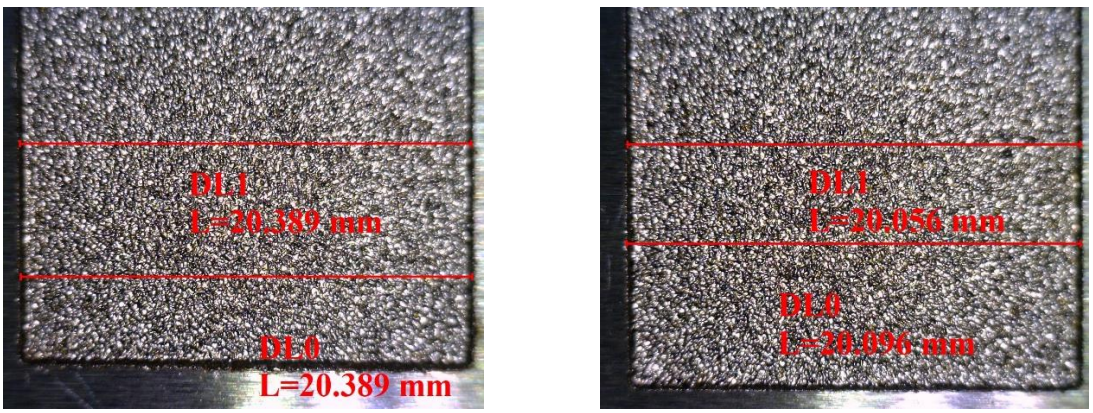

Figure S1: DD analysis of workpiece at (a) 100 µs and (b) 500 µs pulse duration with duty cycle of 60% and peak current of 8 A.

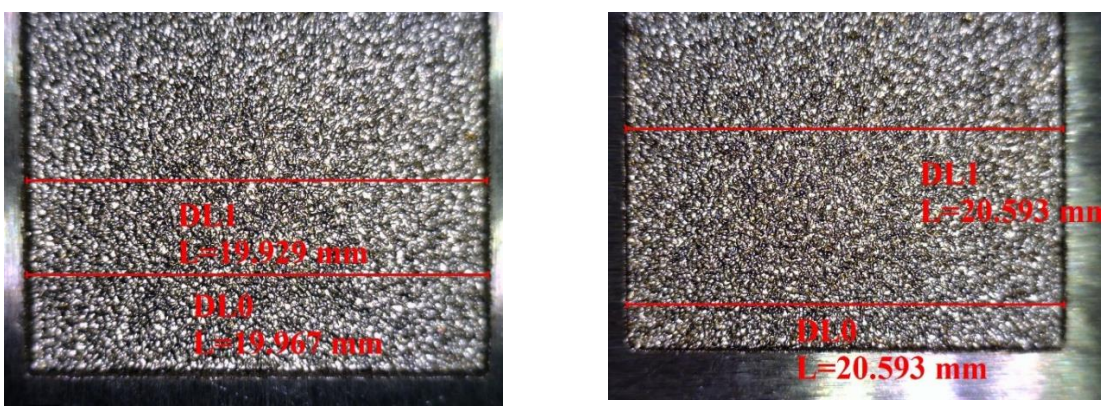

Figure S2: DD analysis of workpiece at (a) 4 A and (b) 12 A peak current with duty cycle of 60% and pulse duration of 300 µs.