

IPC Spezifikationsblatt IPC Specification Sheet	21 ^{*)}	97 ^{*)}	98 ^{*)}	99	101	121	126	127	128	130	152	154	CTI	Solder Limits
Tg [°C]	≥ 110	≥ 110	≥ 150	≥ 150	≥ 110	≥ 110	≥ 170	≥ 110	≥ 150	≥ 170	≥ 170	≥ 170	Kriechstrom- festigkeit Comparative Tracking Index [PLC / V] UL	UL Assembly Solder Process 260 °C x [N] + Solder Lts. [°C / s]
Td 5% [°C] min.	---	---	---	325	310	310	340	310	325	340	340	340		
Füllstoffe/Fillers ≥ 5 Gew. %	nein / no	ja / yes	ja / yes	ja / yes	ja / yes	nein / no	ja / yes	ja / yes	ja / yes	ja / yes	ja / yes	ja / yes		
UL/ANSI	FR-4.0	FR-4.0	FR-4.0	FR-4.0	FR-4.0	FR-4.0	FR-4.0	FR-4.1	FR-4.1	FR-4.1	FR-15.0	FR-15.1		
CTE z α ₁ [ppm/K] max.	---	---	---	60	60	60	60	60	60	60	60	60		
CTE z α ₂ [ppm/K] max.	---	---	---	300	300	300	300	300	300	300	300	300		
TE 50 - 260 °C [%] max.	---	---	---	3,5	4,0	4,0	3,0	4,0	3,5	3,0	3,0	3,0		
T260 [min] min.	---	---	---	30	30	30	30	30	30	30	30	30		
T288 [min] min.	---	---	---	5	5	5	15	5	5	15	15	15		
T300 [min] min.	---	---	---	---	---	---	2	---	---	2	2	2		
UV Block FR-4-86	X												3 / 175 - 249	288 / 30
NP-140TL	X					X *)							3 / 175 - 249	[5] + 288 / 30
FR-4-11PY		X											0 / ≥ 600	288 / 30
NP-155F		X	X	X	X								3 / 175 - 249	[6] + 300 / 30
NP-155FBH		X	X	X	X								3 / 175 - 249	[6] + 300 / 30
NP-175F		X	X	X	X		X						3 / 175 - 249	[6] + 300 / 30
NP-175FBH		X	X	X	X		X						3 / 175 - 249	[6] + 300 / 30
NP-175FBH-15		X	X	X	X		X				X		3 / 175 - 249	[6] + 300 / 30
NPG-150N								X	X				2 / 250 - 399	[6] + 288 / 30
NPG-151								X	X				2 / 250 - 399	[6] + 288 / 30
NPGN-150PY								X	X				0 / ≥ 600	288 / 30
NPG-170								X	X	X			2 / 250 - 399	[6] + 288 / 30
NPG-170D								X	X	X			2 / 250 - 399	[6] + 288 / 30
NPG-180BH								X	X	X			2 / 250 - 399	300 / 30
NPG-180BH-15								X	X	X		X	2 / 250 - 399	300 / 30

Vorgaben der IPC-4101 / Requirements of IPC-4101

*) technische Abklärung erforderlich