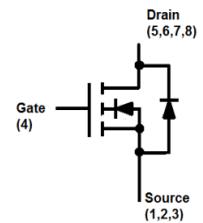
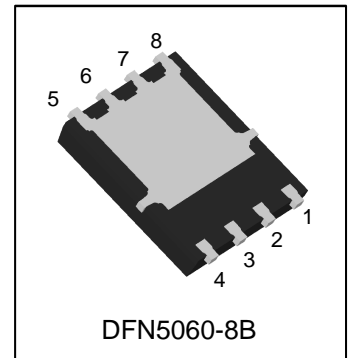


S-LN7418DT1WG

N-Channel 40-V (D-S) MOSFET



1. FEATURES

- Low RDS(on) trench technology.
- Low thermal impedance.
- Fast switching speed.
- We declare that the material of product are Halogen Free and compliance with RoHS requirements.
- S-prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

2. APPLICATION

- White LED boost converters
- DC/DC Conversion
- Motor Drives

3. ORDERING INFORMATION

Device	Marking	Shipping
S-LN7418DT1WG	LN7418	3000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C unless otherwise stated)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDSS	40	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current(Note 1)	TA =25°C	ID	10.5	A
	TA =70°C		8.6	
Pulsed Drain Current (Note 2)		IDM	42	
Avalanche Current (L = 0.1mH)		IAS	TBD	A
Avalanche Energy (L= 0.1mH)		EAS	TBD	mJ
Power Dissipation(Note 1)	TA =25°C	PD	2.7	W
	TA =70°C		1.7	
Operating Junction and Storage Temperature Range		TJ/Tstg	-55 ~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Thermal Resistance-Junction to Ambient(Note 1)	RθJA	45	°C/W

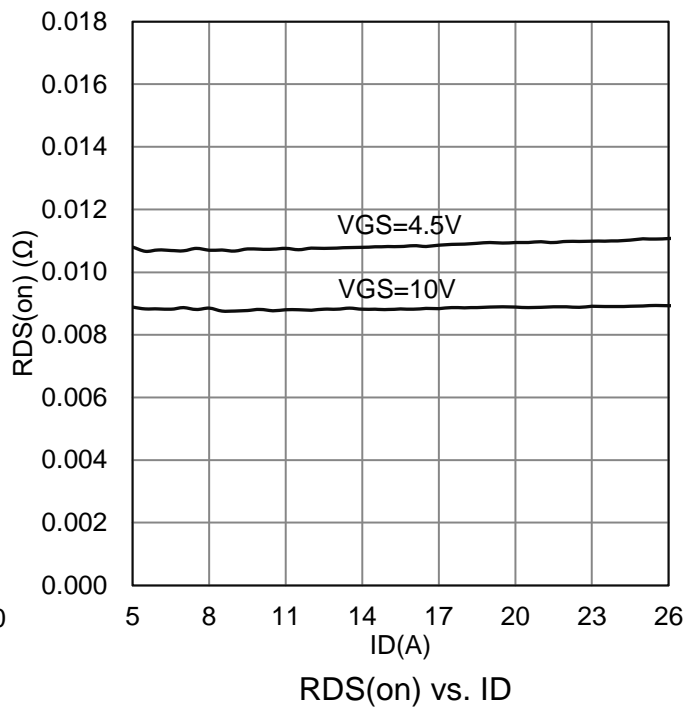
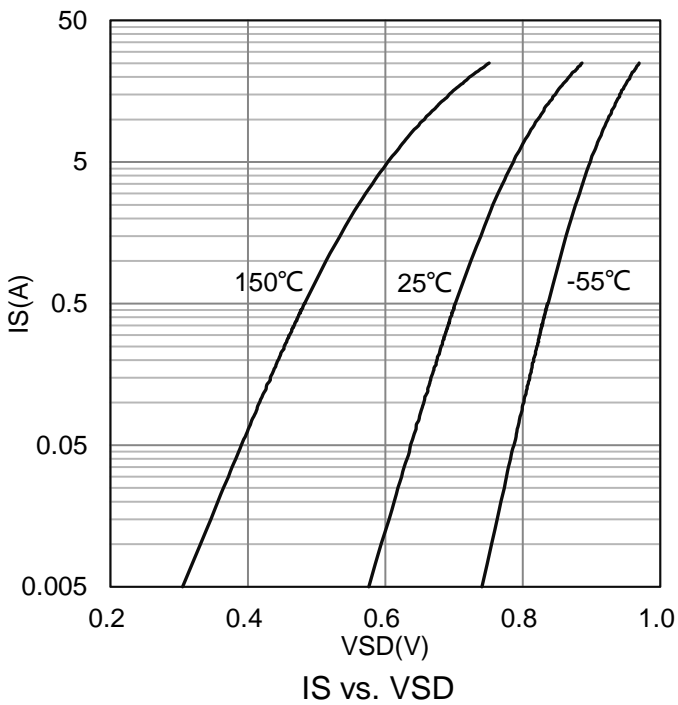
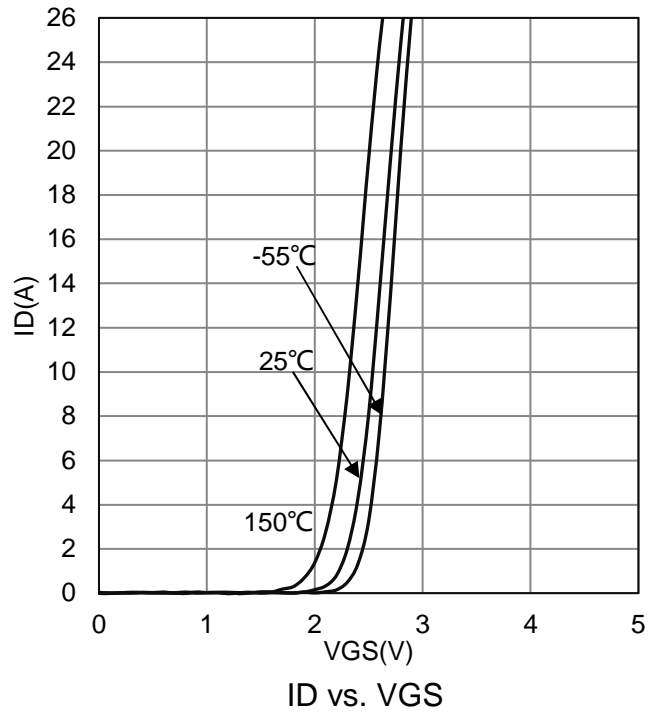
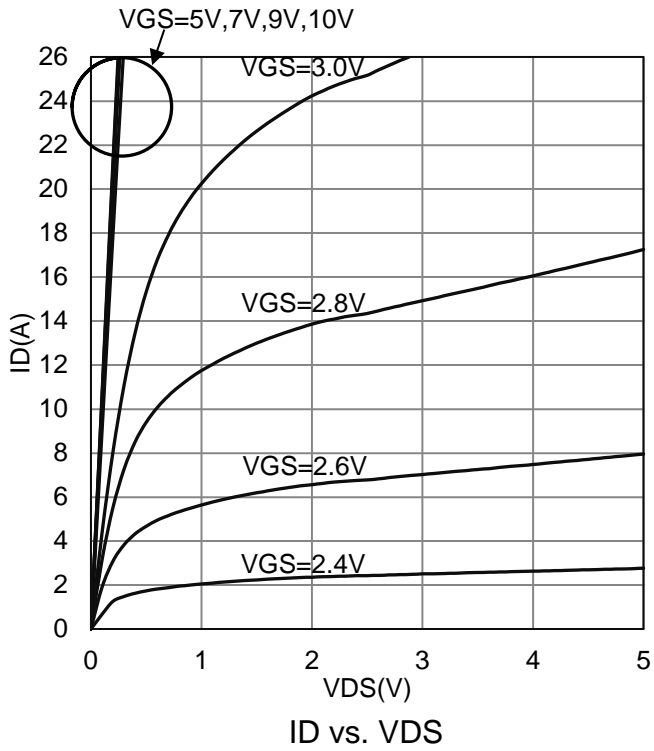
- 1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.
- 2.Pulse width limited by maximum junction temperature

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

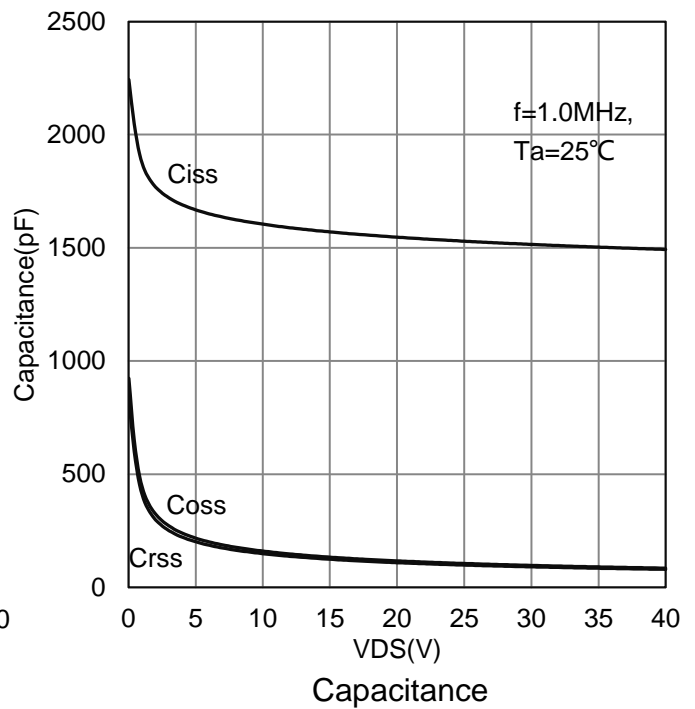
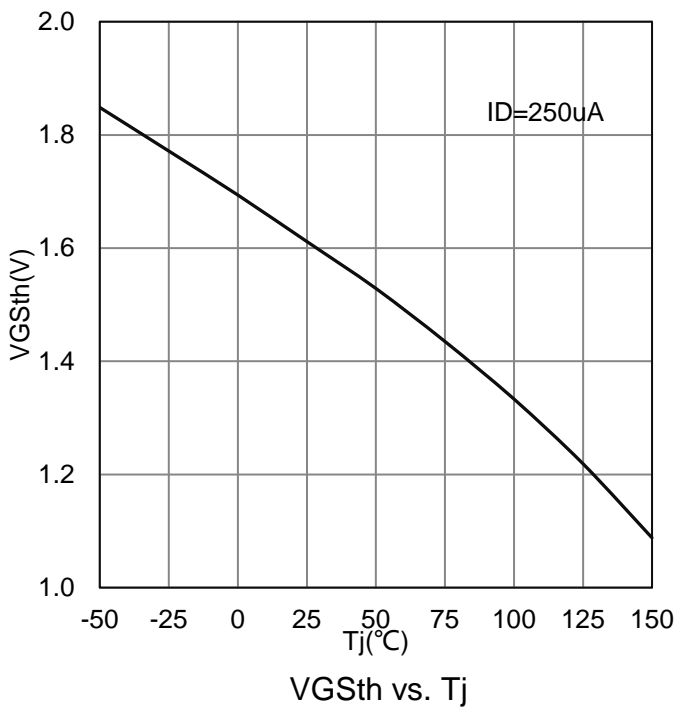
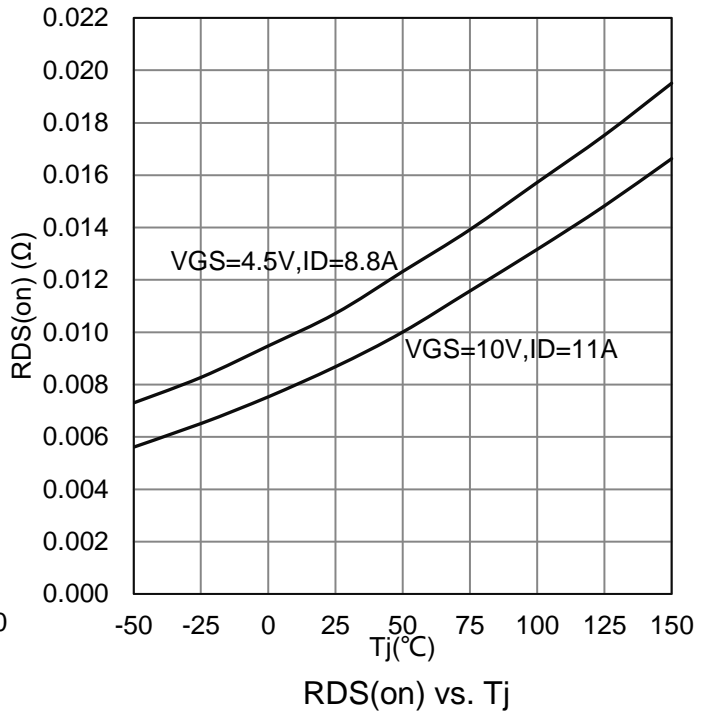
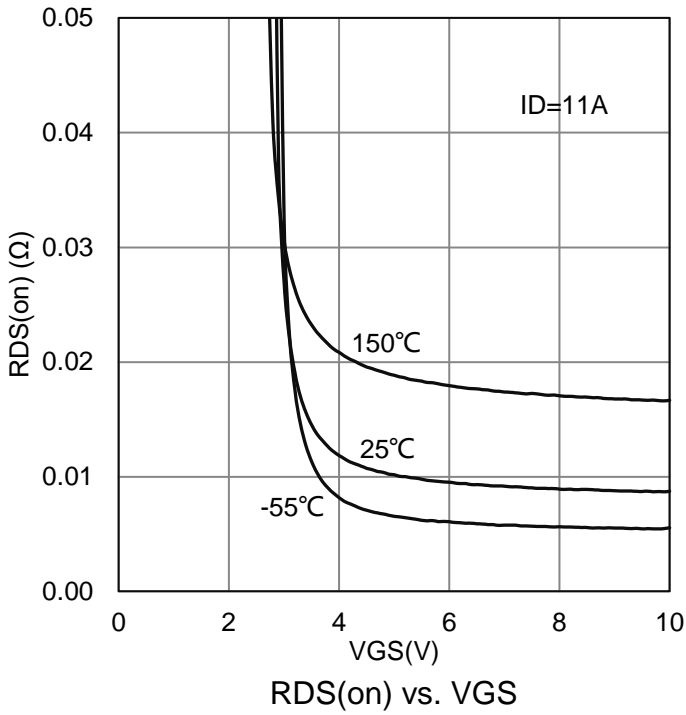
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain to Source Breakdown Voltage (VGS = 0 V, ID = 250 μA)	BVDSS	40	-	-	V
Gate-Source Threshold Voltage (VDS = VGS, ID = 250 μA)	VGS(th)	1	-	-	V
Gate-Body Leakage (VDS = 0 V, VGS = ±20 V)	IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = 32 V, VGS = 0 V)	IDSS	-	-	1	μA
Drain-Source On-Resistance(Note 3) (VGS = 10 V, ID = 11 A) (VGS = 4.5 V, ID = 8.8 A)	RDS(on)	- -	9.5 12	12 16	mΩ
Diode Forward Voltage(Note 3) (IS = 2.3 A, VGS = 0 V)	VSD	-	0.74	1.2	V
Dynamic					
Input Capacitance	(VDS = 15 V, VGS = 0 V, f = 1MHz)	Ciss	-	1532	-
Output Capacitance		Coss	-	136	-
Reverse Transfer Capacitance		Crss	-	123	-
Total Gate Charge	(VDS = 20 V, VGS = 4.5 V, ID = 11A)	Qg	-	15.3	-
Gate-Source Charge		Qgs	-	5	-
Gate-Drain Charge		Qgd	-	5.2	-
Turn-On Delay Time	(VDS=20 V, RL=1.9 Ω, ID=11 A, VGEN =10 V, RGEN=6 Ω)	td(on)	-	6	-
Rise Time		tr	-	13	-
Turn-Off Delay Time		td(off)	-	57	-
Fall Time		tf	-	22	-

3.Pulse test: PW ≤ 300μs duty cycle ≤ 2%.

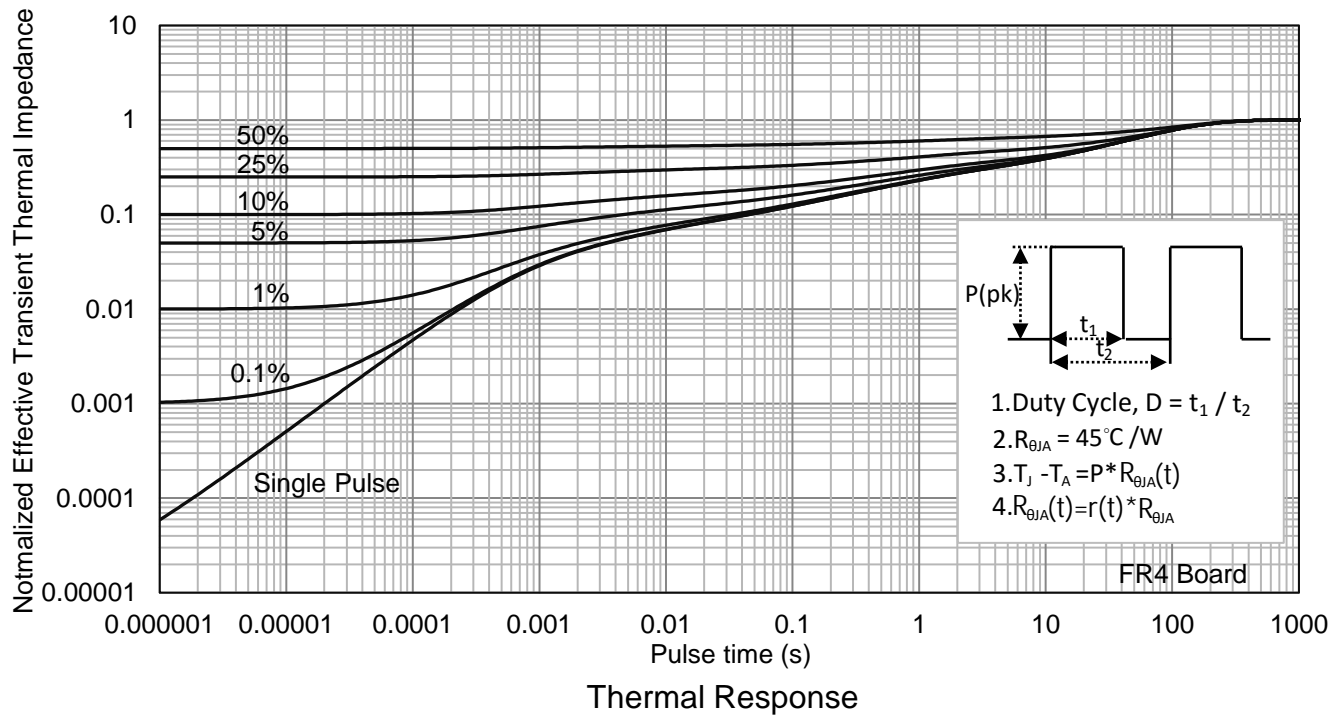
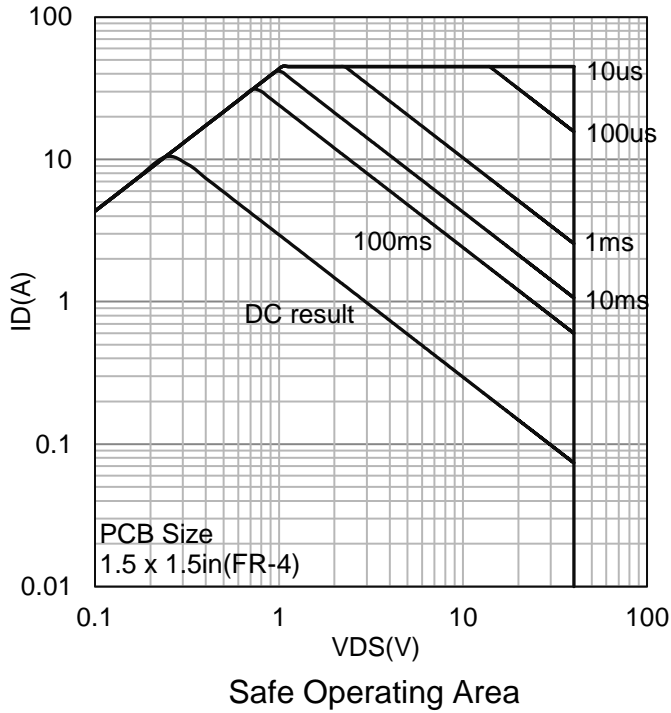
7. ELECTRICAL CHARACTERISTICS CURVES



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

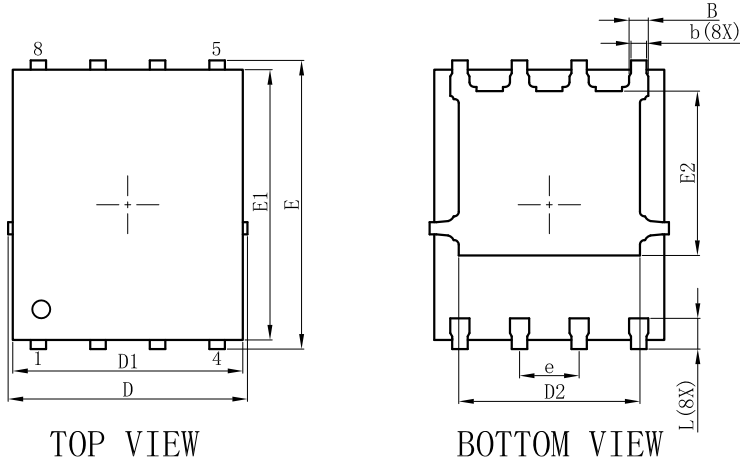


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8. OUTLINE AND DIMENSIONS

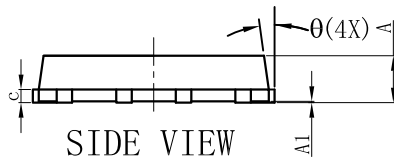
DFN5060-8B



TOP VIEW

BOTTOM VIEW

DFN5060-8B			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.00	0.02	0.05
E	6.00	6.15	6.30
E1	5.66	5.76	5.86
E2	3.40	3.50	3.60
D	4.95	5.10	5.25
D1	4.80	4.90	5.00
D2	3.76	3.86	3.96
b	0.30	0.35	0.40
B	0.36	0.41	0.46
L	0.56	0.66	0.76
e	1.27BSC		
c	0.254REF.		
θ	0°	-	12°
All Dimensions in mm			

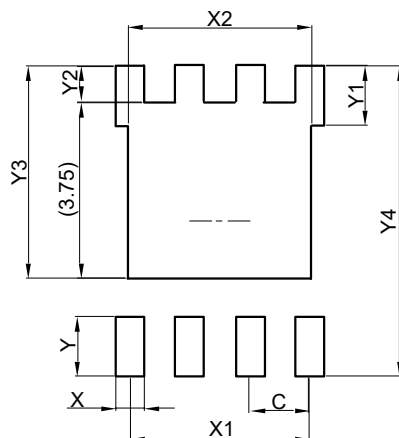


SIDE VIEW

GENERAL NOTES

1. Top package surface finish $Ra0.4 \pm 0.2\mu m$
2. Bottom package surface finish $Ra0.7 \pm 0.2\mu m$
3. Side package surface finish $Ra0.4 \pm 0.2\mu m$
4. Protrusion or Gate Burrs shall not exceed 0.05mm per side.
5. Off-center Max0.038mm; Mismatch Max 0.038mm.

9. SOLDERING FOOTPRINT



DFN5060-8B	
DIM	(mm)
C	1.27
X	0.61
X1	3.81
X2	3.91
Y	1.27
Y1	1.27
Y2	0.77
Y3	4.52
Y4	6.61

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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