

BRCs005N06SHTP

Rev.A Mar.-2026

/ Descriptions

TOLT-16L N

N-Channel MOSFET in a TOLT-16L Plastic Package .

/ Features

$V_{DS}(V)=60V$ $I_D=860A$

$R_{DS(ON)}@10V$ 0.5m (Typ. 0.38 m)

$R_{DS(ON)}@6V$ 0.9m (Typ. 0.66 m)

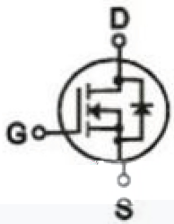
HF Product.

/ Applications

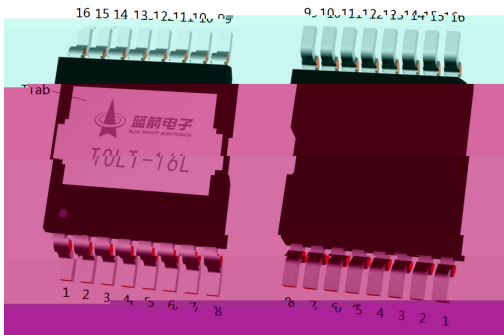
BMS

BMS, Drones, High power inverter system, Light electric vehicles.

/ Equivalent Circuit



/ Pinning



PIN1、2、3、4、5、6、7: S

PIN8: G

PIN9、10、11、12、13、14、15、16、Tab: D

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_A=25$)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Drain Current(DC)	$I_D(T_C=25^{\circ}C)$	860	A
	$I_D(T_C=100^{\circ}C)$	607	A
Drain Current – Pulsed ^{*,**}	I_{DM}	2714	A
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	P_{tot}	680	W
Single Pulse Avalanche Energy	E_{AS}	7455	mJ
Junction and Storage Temperature Range	T_j, T_{stg}	-55 to 175	
Thermal resistance, junction – ambient ^{**}	R_{JA}	48	/ W
Thermal resistance, junction – case ^{**}	R_{JC}	0.22	

Notes:

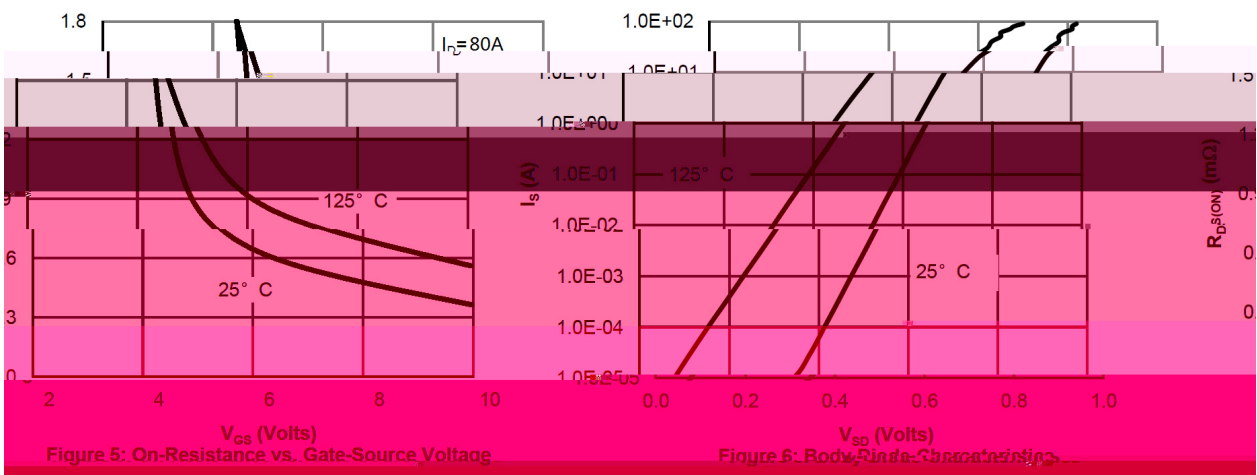
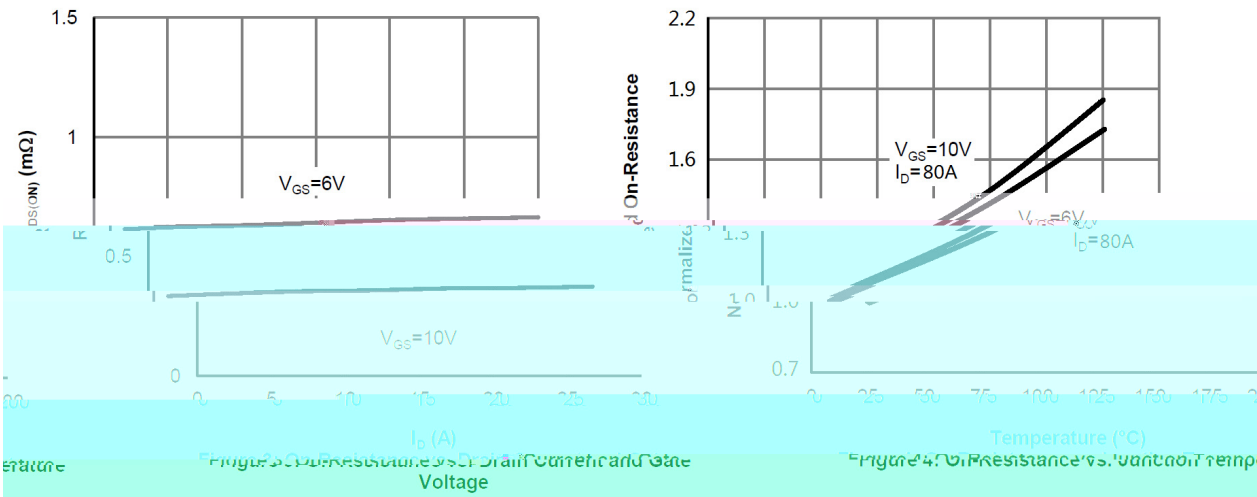
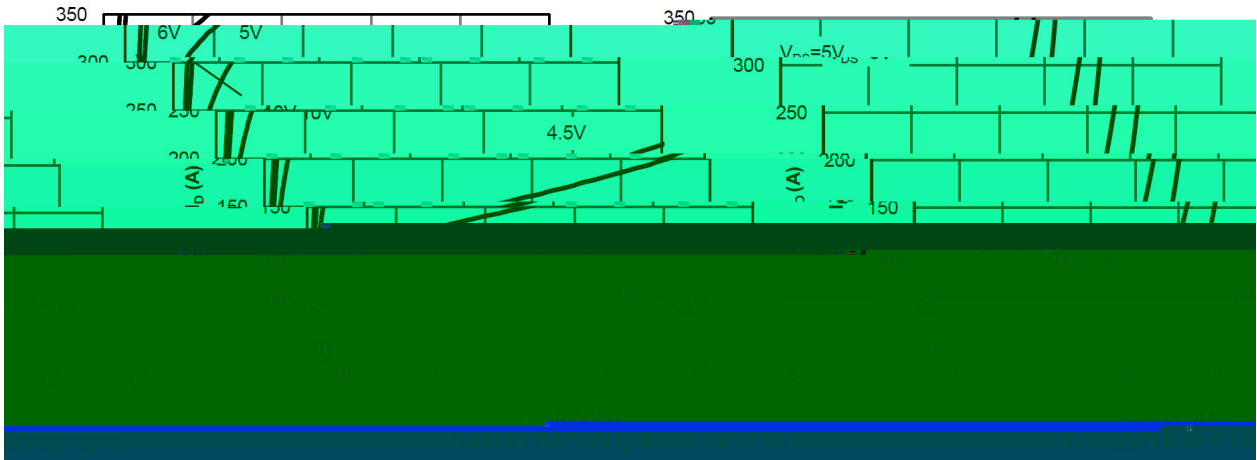
* Pulse width 300 μ s, duty cycle 2 %^{**} Surface Mounted on minimum footprint pad area^{***} Limited by bonding wire/ Electrical Characteristics($T_A=25$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu A, V_{GS}=0V$	60			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=48V, V_{GS}=0V$			1	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	2		4	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=80A$		0.38	0.5	m
		$V_{GS}=6V, I_D=80A$		0.66	0.9	m
Diode Forward Voltage	V_{SD}	$I_S=5A, V_{GS}=0V$			1.3	V
Reverse Recovery Time	t_{rr}	$I_D = 50 A, V_{DS} = 30 V$ $dI_{SD}/dt = 100 A/\mu s$		71.9		nS
Reverse Recovery Charge	Q_{rr}			126		nC
Gate resistance	R_g	$V_{DS}=0V, V_{GS}=0V$ $f=1.0MHz$		2.5		
Input Capacitance	C_{iss}	$V_{DS}=30V, V_{GS}=0V$ $f=1.0MHz$		16790		pF
Output Capacitance	C_{oss}			6410		
Reverse Transfer Capacitance	C_{rss}			1560		

/ Electrical Characteristics(T_A=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =30V I _{DS} =50A		280		nC
Gate Source Charge	Q _{gs}			56.2		
Gate Drain Charge	Q _{gd}			77.2		
Turn-On Delay Time	t _{d(on)}	V _{GS} =10V V _{DS} =30V R _G =3 I _D =50A		42.1		ns
Turn-On Rise Time	t _r			195		
Turn-Off Delay Time	t _{d(off)}			177		
Turn-Off Fall Time	t _f			125		

/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

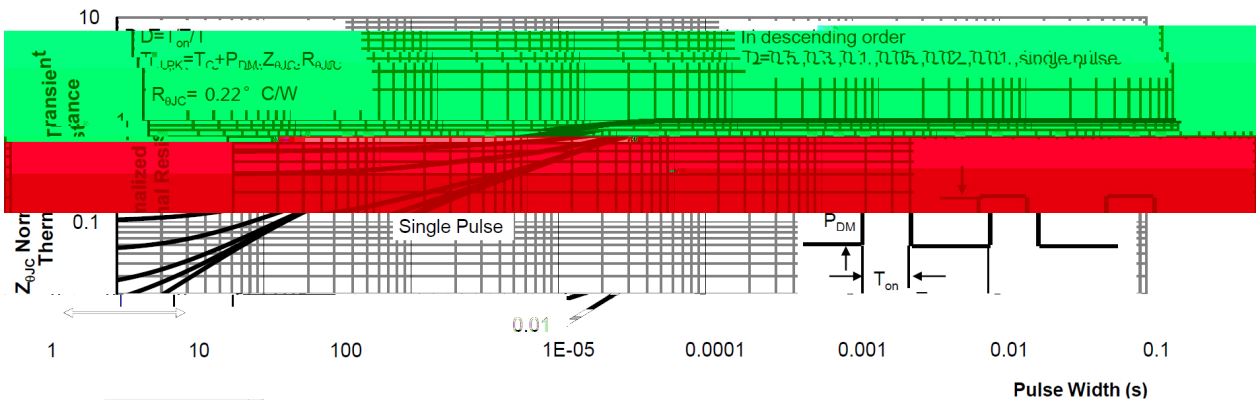
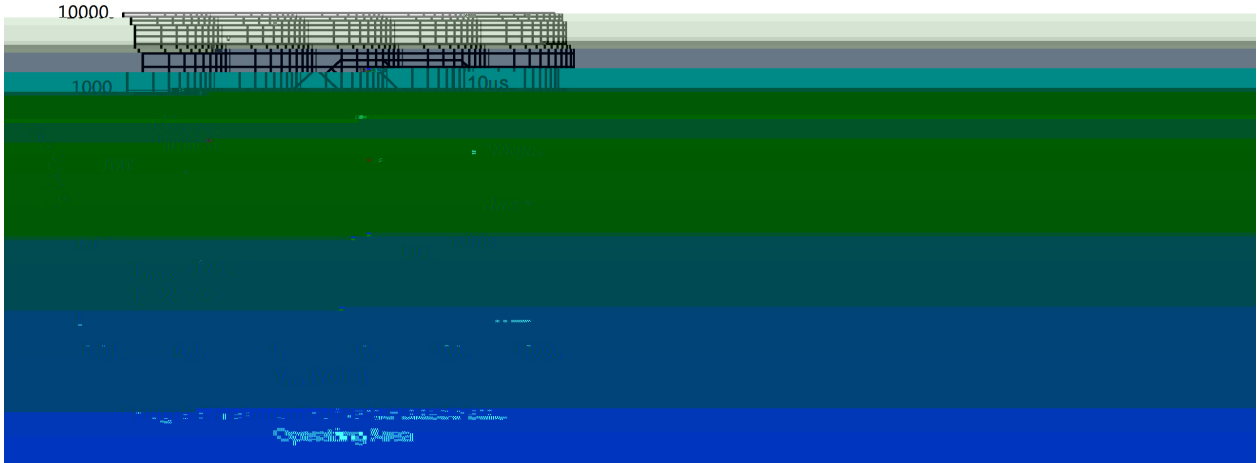
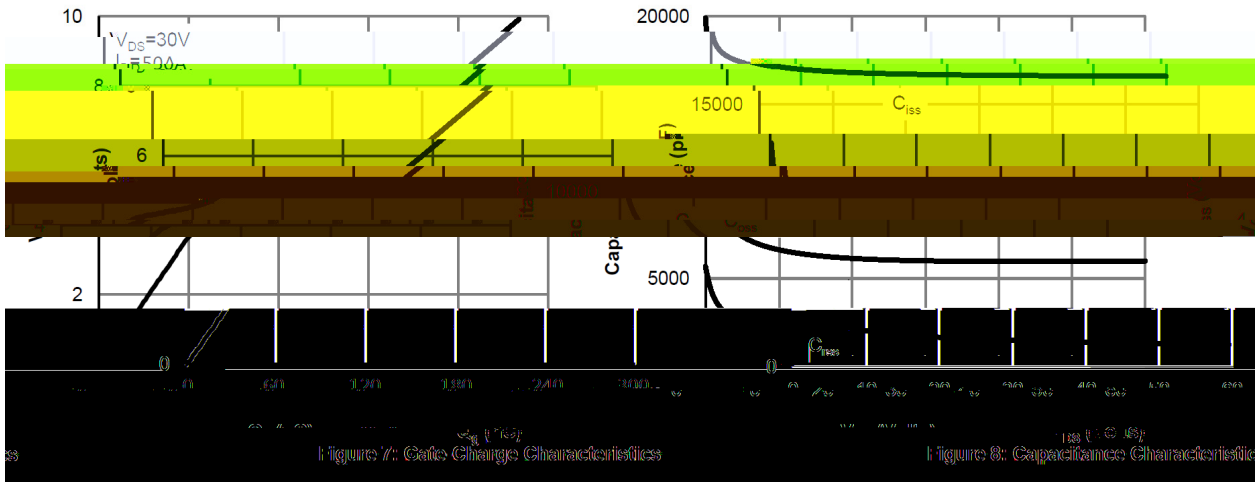
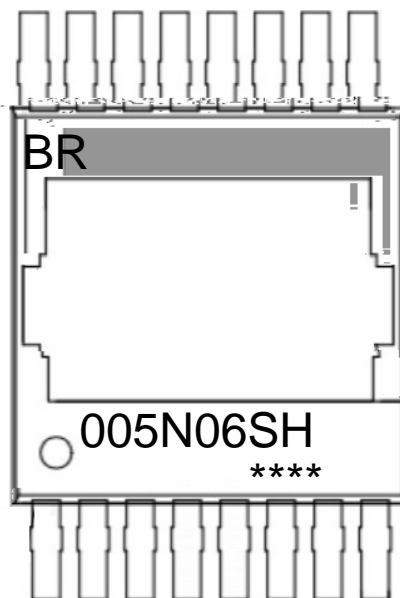


Figure 10: Noi

/ Marking Instructions



BR

005N06SH

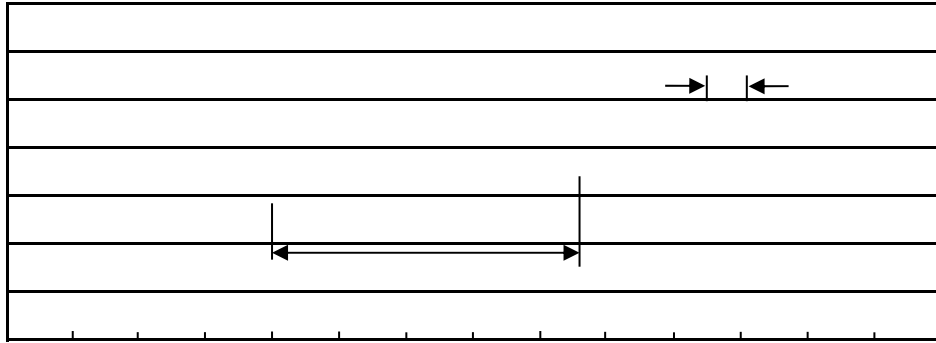
Note:

BR: Company Code

005N06SH: Product Type Code

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- | | | | | | |
|---|-------|-----|-----------|----------|---|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | | 5±0.5sec; | | 2.Peak Temp.:245±5 , Duration:5±0.5sec. |
| 3 | | | 2 | 10 /sec. | 3. Cooling Speed: 2~10 /sec. |

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5℃ Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
TOLT-16L	1,300	1	1,300	4	5,200	13"x24	357x340x41	377x357x180

/ Notices

All information provided in this document is subject to legal disclaimers.