

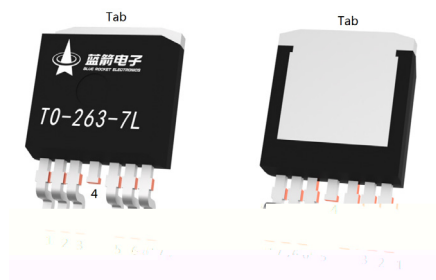
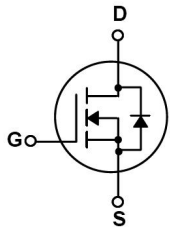
Rev. A Jul.-2025

TO-263-7L N
N-CHANNEL MOSFET in a TO-263-7L Plastic Package.

$V_{DS} = 100V$ $I_D = 300A$
 $R_{DS(on)} @ 10V \leq 1.3m\Omega$ (Type: 1.1m Ω)
 $R_{DS(on)} @ 6V \leq 1.9m\Omega$ (Type: 1.5m Ω)
 H F Product.

BMS

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



PIN 1 G PIN 2 3 5 6 7 S PIN 4 Tab D

See Marking Instructions.

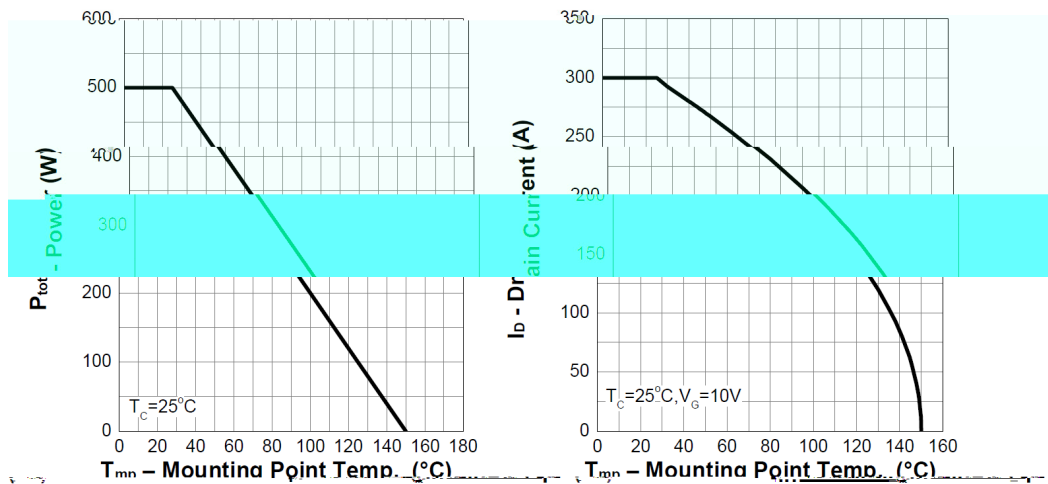
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Drain Current (D.C.) ^{***}		$I_D (T_C = 25^{\circ}\text{C})$	300	A
		$I_D (T_C = 100^{\circ}\text{C})$	150	A
Pulsed Drain Current ^{***}		I_{DM}	1200	A
Gate-Source Voltage		V_{GS}	± 20	V
Continuous-Source Current		$I_S (T_C = 25^{\circ}\text{C})$	300	A
Single Pulsed Avalanche Energy $L=1.0\text{mH}$ [*]		E_{AS}	1250	mJ
Total Power Dissipation		$P_D (T_C = 25^{\circ}\text{C})$	500	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 175	
Thermal Resistance-Junction to Ambient [*]	Steady-State	$R_{\theta JA}$	30	/W
Thermal Resistance-Junction to Case [*]	Steady-State	$R_{\theta JC}$	0.3	

Notes:

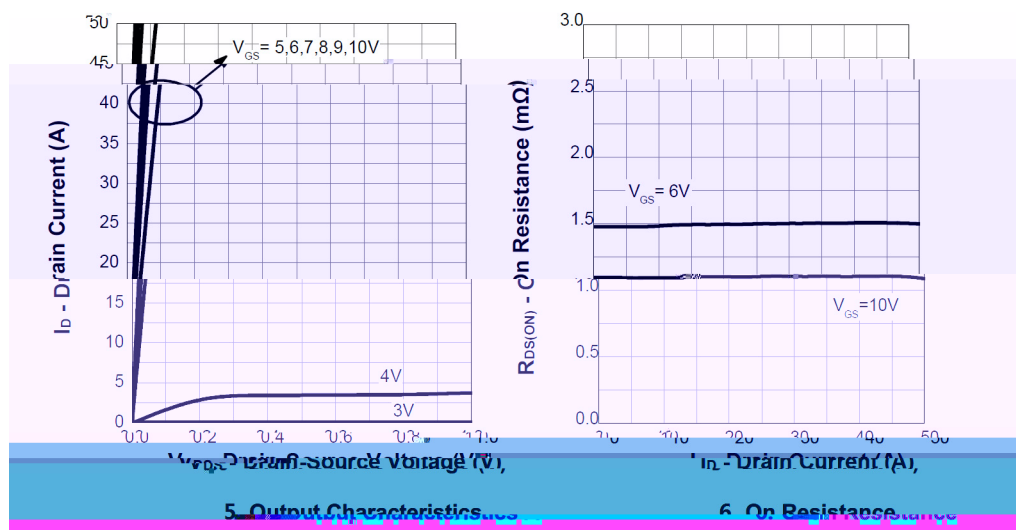
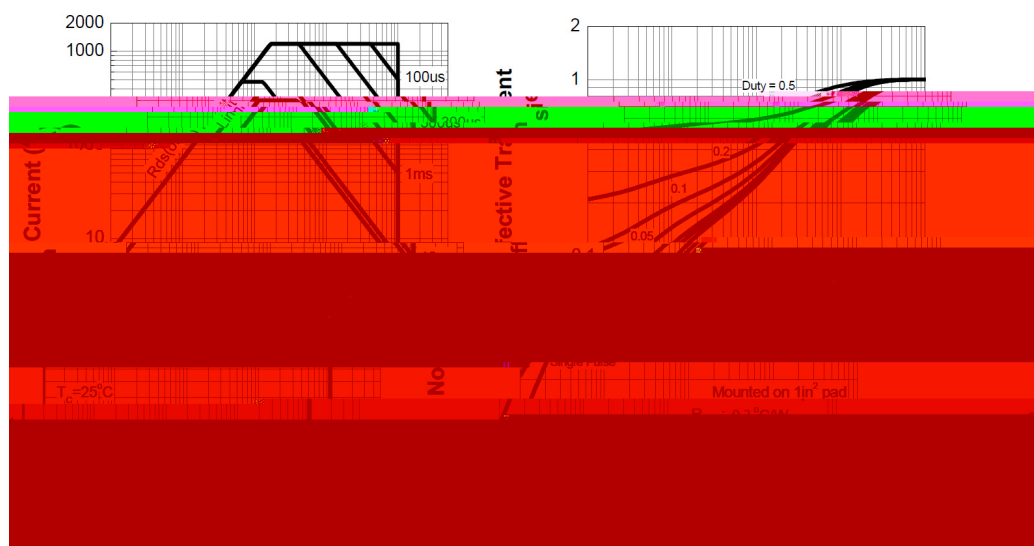
^{*} Surface Mounted on 1 in² pad area, $t \leq 10\text{ sec}$
^{**} Pulse width $\leq 300\ \mu\text{s}$, duty cycle $\leq 2\%$
^{***} Limited by bonding wire

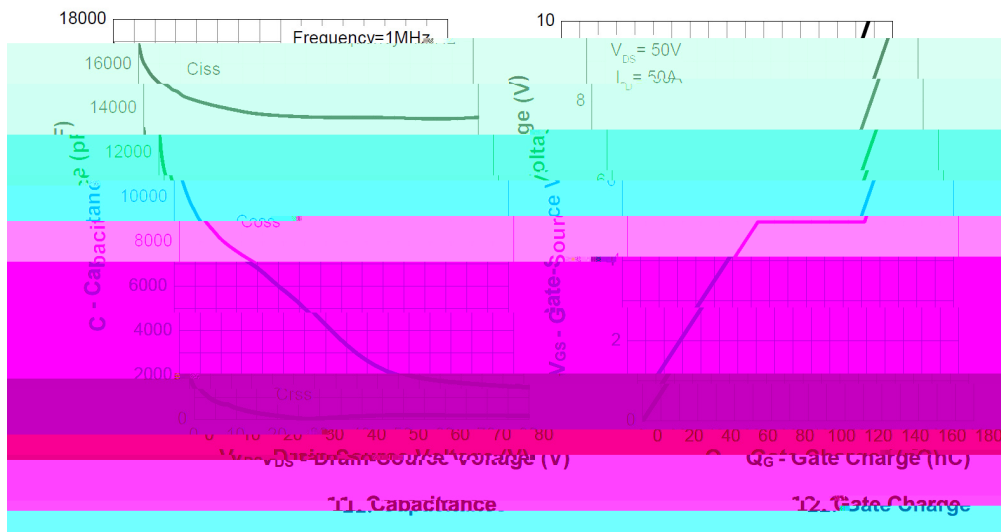
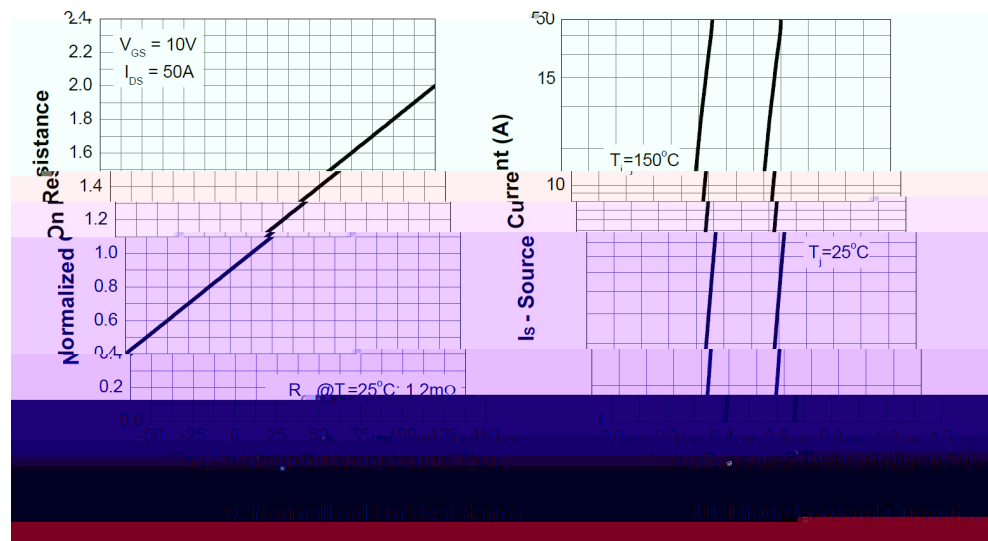
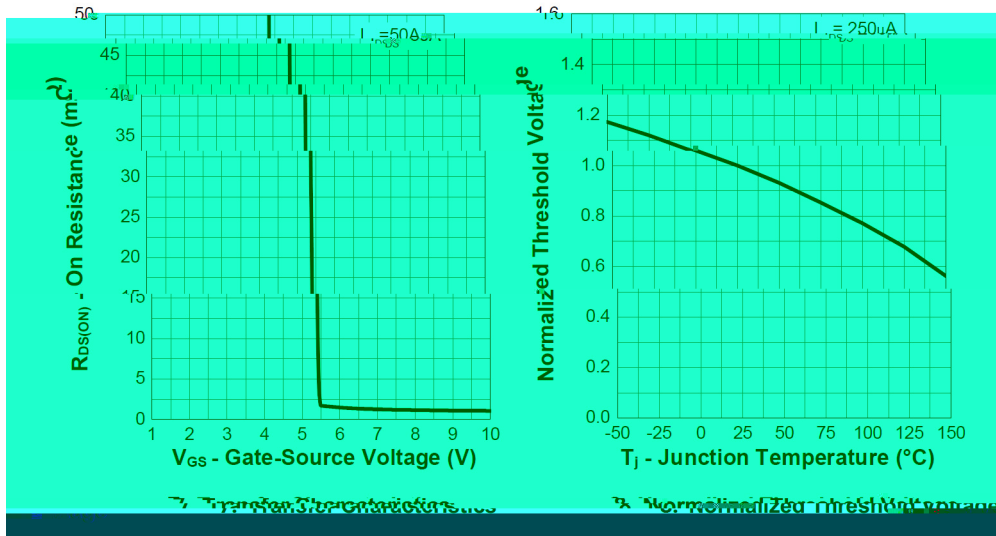
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS} = 0\text{V}$ $I_D = 250\ \mu\text{A}$	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 80\text{V}$ $V_{GS} = 0\text{V}$			1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS} = \pm 20\text{V}$ $V_{DS} = 0\text{V}$			± 100	nA
Forward						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$ $I_D = 250\ \mu\text{A}$	2		4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 10\text{V}$ $I_D = 50\text{A}$		1.1	1.3	m Ω
		$V_{GS} = 6\text{V}$ $I_D = 25\text{A}$		1.5	1.9	
Forward On Voltage	V_{SD}	$V_{GS} = 0\text{V}$ $I_S = 50\text{A}$			1.3	V
Reverse Recovery Time	t_{rr}	$I_{DS} = 50\text{A}$, $V_{GS} = 0\text{V}$ $dI_{SD}/dt = 100\text{A}/\mu\text{s}$		137		nS
Reverse Recovery Charge	Q_{rr}			347		nC
Input Capacitance	C_{iss}	$V_{DS} = 50\text{V}$ $V_{GS} = 0\text{V}$ $f = 1\text{MHz}$		11876		pF
Output Capacitance	C_{oss}			2041		
Reverse Transfer Capacitance	C_{rss}			106		

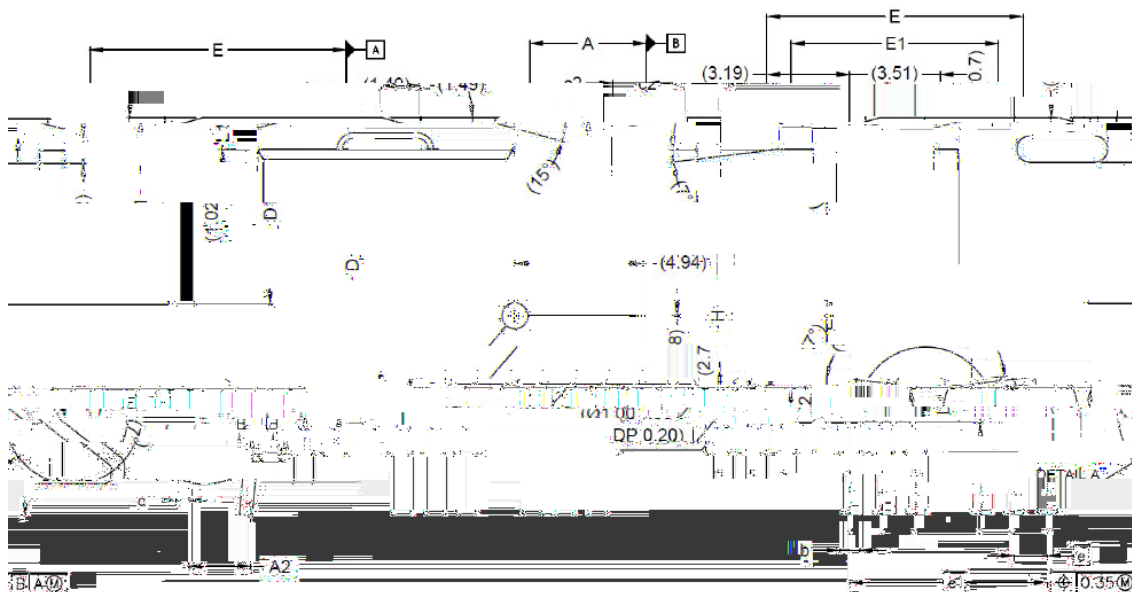
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_g(10V)$	$V_{GS} = 10V$ $V_{DS} = 50V$ $I_D = 50A$		244		nC
Gate Source Charge	Q_{gs}			46		
Gate Drain Charge	Q_{gd}			67		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS} = 10V$ $V_{DS} = 50V$ $R_L = 2.5\Omega$ $R_G = 4.5\Omega$ $I_{DS} = 50A$		29		ns
Turn-On Rise Time	t_r			121		
Turn-Off Delay Time	$t_{d(off)}$			198		
Turn-Off Fall Time	t_f			175		



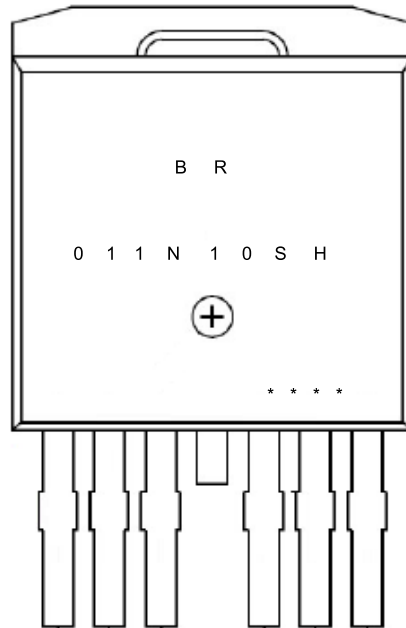
1. Power Capability 2. Current Capability







Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	MIN.	MAX.		MIN.	MAX.
A	4.30	4.70	D1	6.86	7.42
A1	-	0.25	E	9.68	10.08
A2	2.20	2.60	E1	7.70	8.30
BSC	b	0.65	e	0.85	1.27
BSC	b1	0.65	e1	0.80	7.62
	b2	0.80	L	1.00	1.78
		1.78	c	0.45	0.60
	0.25BSD		c1	0.45	0.55
	14.61	15.88	c2	1.25	1.40
			D	9.00	9.40



BR

011N10SH

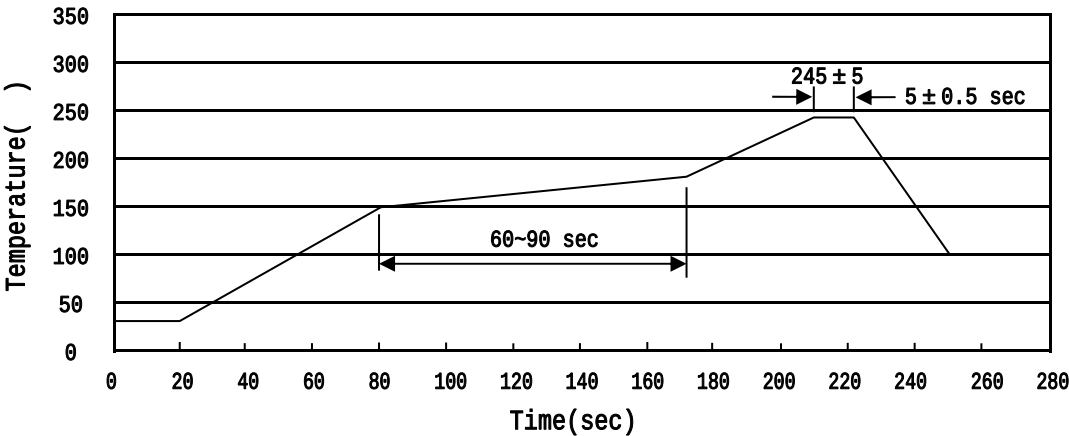
Note:

BR: Company Code

011N10SH: Product Type Code

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

Temperature Profile for IR Reflow Soldering(Pb-Free)



Note :

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

260 ± 5 °C, 10 ± 1 sec, Temp.: 260 ± 5 °C, Time: 10 ± 1 sec

/ REEL

Package Type	Units					Dimension (unit: mm)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
TO-263-7L	800	1	800	6	4,800	13" × 24"	360 × 360 × 50	380 × 335 × 366

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