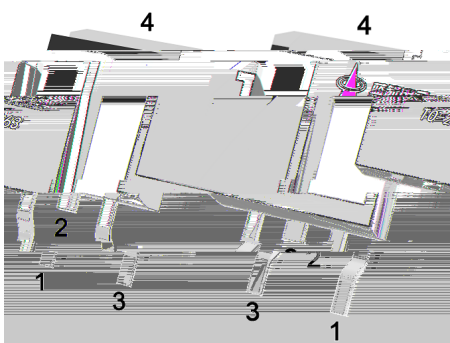
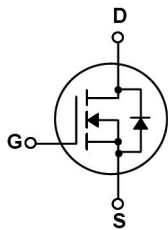


Rev.A Apr.-2023

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

These devices are well suited for high efficient switched mode power supplies, Active power factor correction, electronic lamp ballast based on half bridge topology, Meet the stringent requirements of automotive applications.



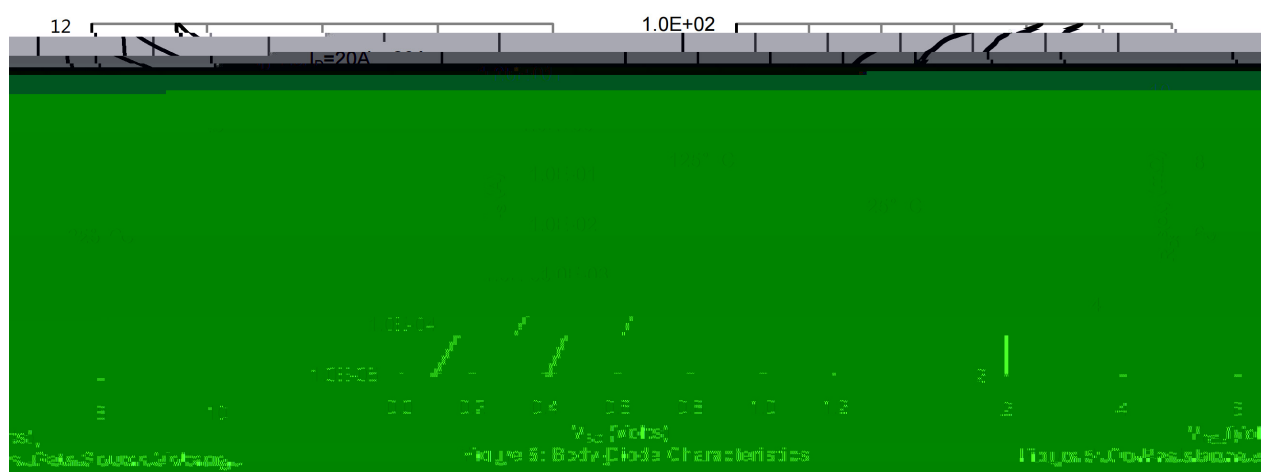
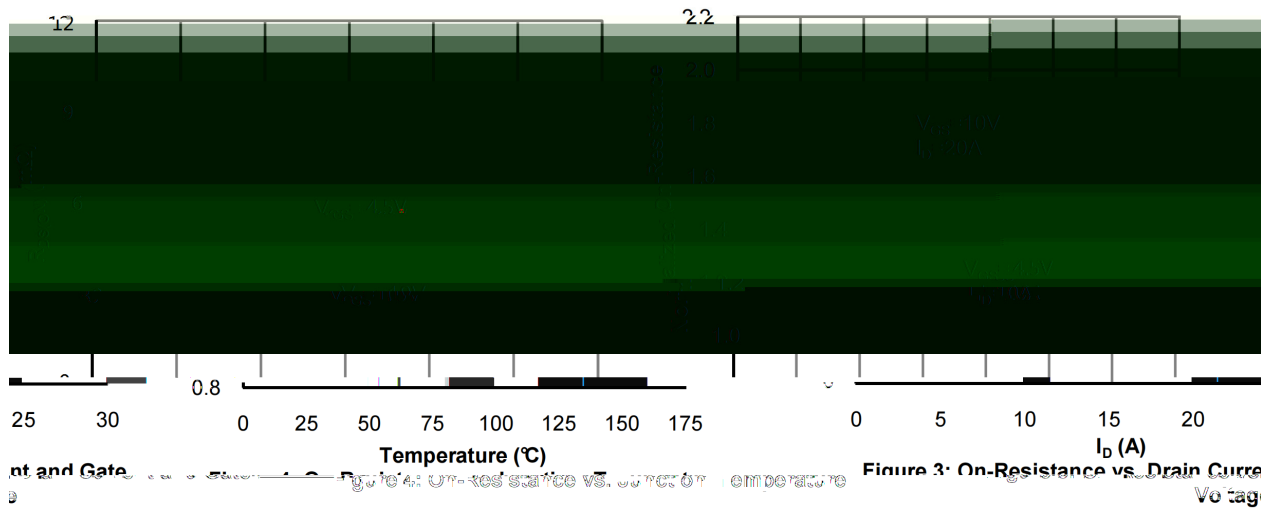
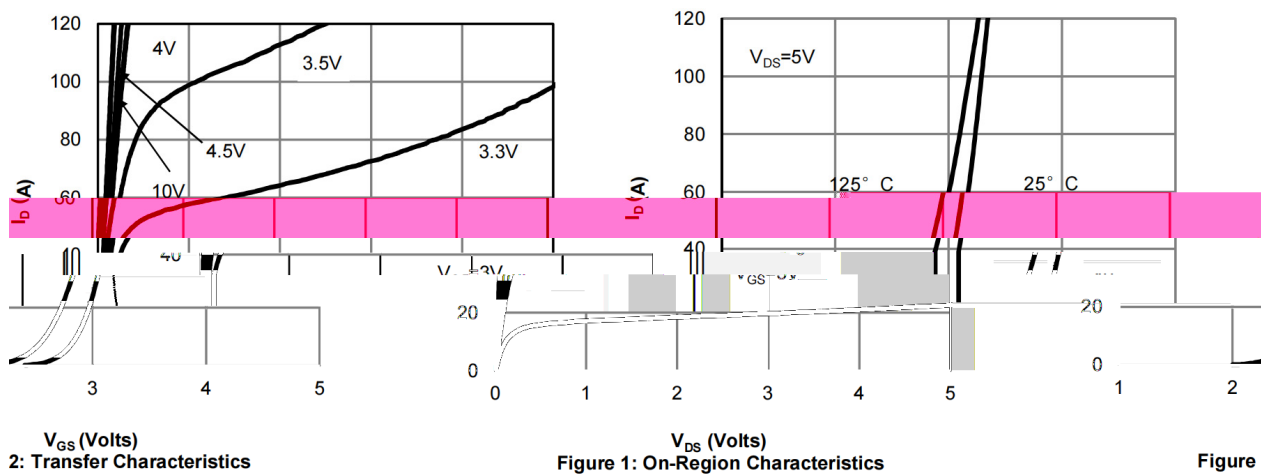
PIN1 G PIN 2 4 D PIN 3 S

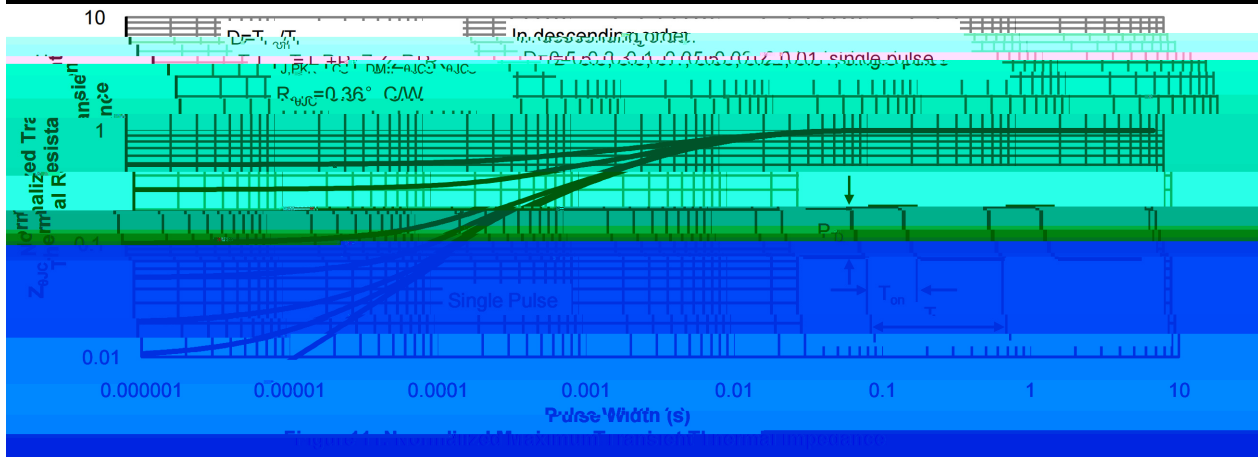
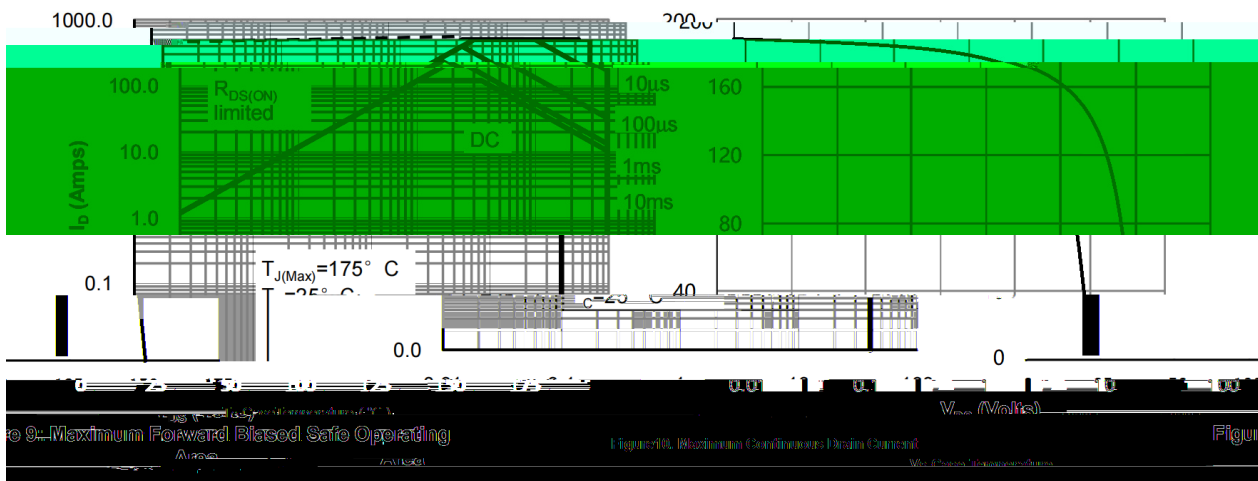
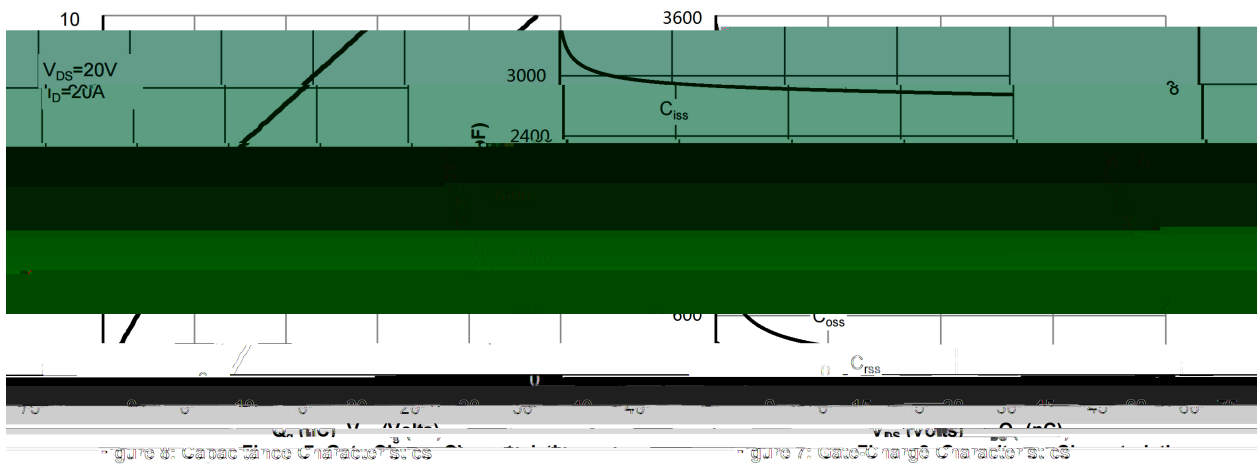
See Marking Instructions.

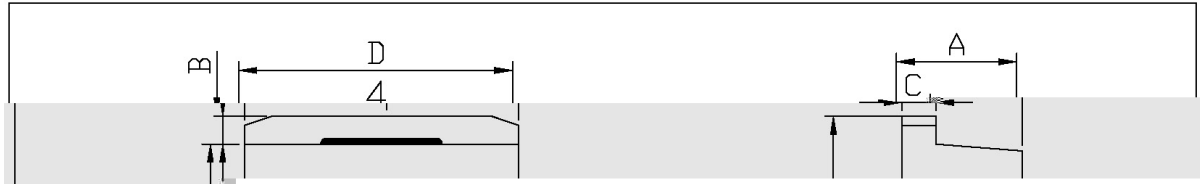
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	40	V
Drain Current		$I_D(T_C=25^{\circ}C)$	196	A
Pulsed Drain Current		I_{DM}	500	A
Gate-Source Voltage		V_{GS}	± 20	V
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	561.8	mJ
Avalanche Current		I_{AS}	26.5	A
Total Power Dissipation		$P_D(T_C=25^{\circ}C)$	347	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	$t \leq 10s$	$R_{\theta JA}$	15	/W
	Steady-State		60	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	0.36	

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$	$I_D=250 A$	40			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40V$	$V_{GS}=0V$			1	A
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$	$V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$	$I_D=250 A$	1	1.7	3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$	$I_D=20A$		4.5	5	m
		$V_{GS}=4.5V$	$I_D=10A$		7	10	
Forward On Voltage	V_{SD}	$V_{GS}=0V$	$I_S=1A$			1.2	V
Gate resistance	R_g	$f=1MHz$			2.3		
Input Capacitance	C_{iss}	$V_{DS}=25V$ $f=1MHz$ $V_{GS}=0V$			2950		pF
Output Capacitance	C_{oss}				210		
Reverse Transfer Capacitance	C_{rss}				190		

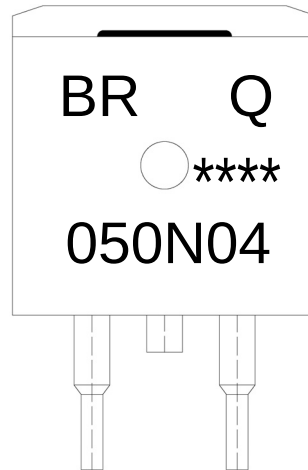
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_g(10V)$	$V_{GS}=10V$ $V_{DS}=20V$ $I_D=20A$		70		nC
Total Gate Charge	$Q_g(4.5V)$			15		
Gate Source Charge	Q_{gs}			15		
Gate Drain Charge	Q_{gd}			22		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=20V$ $R_L=1$ $R_{GEN}=3$		15		ns
Turn-On Rise Time	t_r			30		
Turn-Off Delay Time	$t_{d(off)}$			54		
Turn-Off Fall Time	t_f			20		







单位: mm							
Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters			
	Min	Max		Min	Max		
A	4.30	4.70	E _L	0.00	0.4		
B	1.00	1.40	e ₁	2.34	2.54		
b	0.70	0.90	e ₂	4.88			
b ₁	1.15	1.35	J ₁	15.00			
b ₂	0.40	0.60	I ₂	2.24			
C	1.20	1.40	L ₃	1.20			
D	9.80	10.20					
TP-263							



Q

Note:

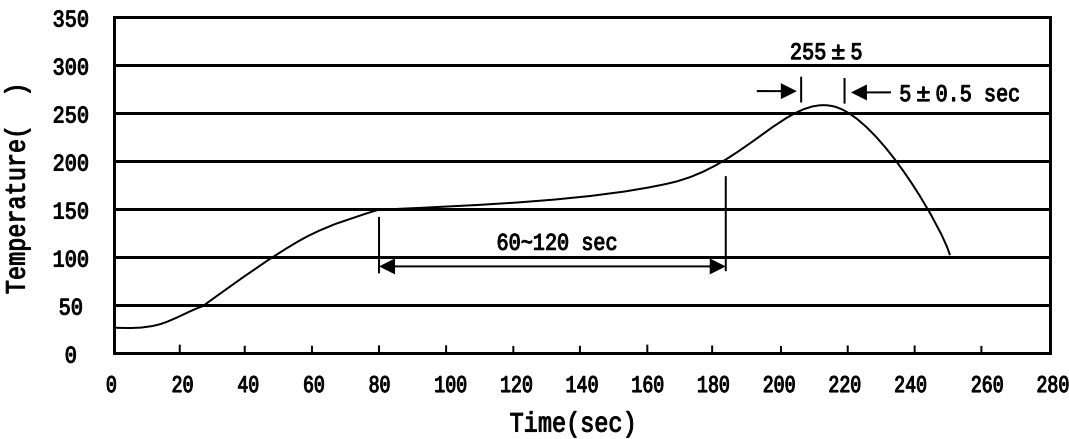
BR: Company Code

Q: Automobile halogen-free product Code

050N04: Product Type

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

Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 2

255 5

5 0.5sec;

2.Peak Temp.:255 5 , Duration:5 0.5sec.
- 3

2 10

/sec.

3. Cooling Speed: 2~10 /sec.

260 5

10 1 sec.

Temp.:260±5

Time:10±1 sec

/ 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
TO-263	800	1	800	6	4,800	13" ×24	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Tube	Inner Box	Outer Box
TO-263	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180