

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	V _{DSS}	40	V	
Drain Current	I _D (T _C =25°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°C)	347	W	
Junction and Storage Temperature Range	T _J , T _{STG}	-55 to 150		
Thermal Resistance-Junction to Ambient	t ≤ 10s	R _{θJA}	15	/W
	Steady-State		60	
Thermal Resistance-Junction to Case	Steady-State	R _{θJC}	0.36	

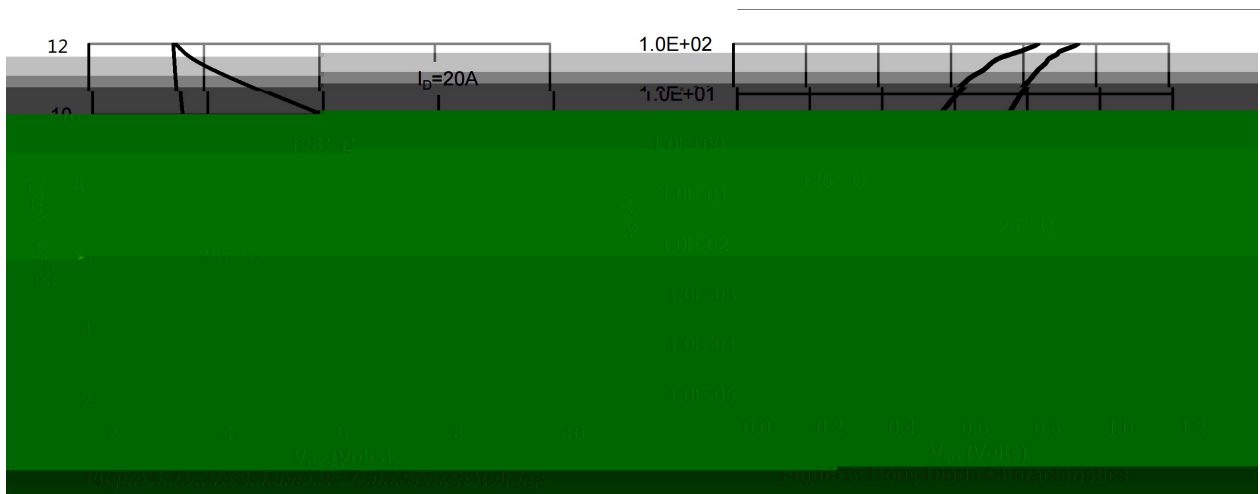
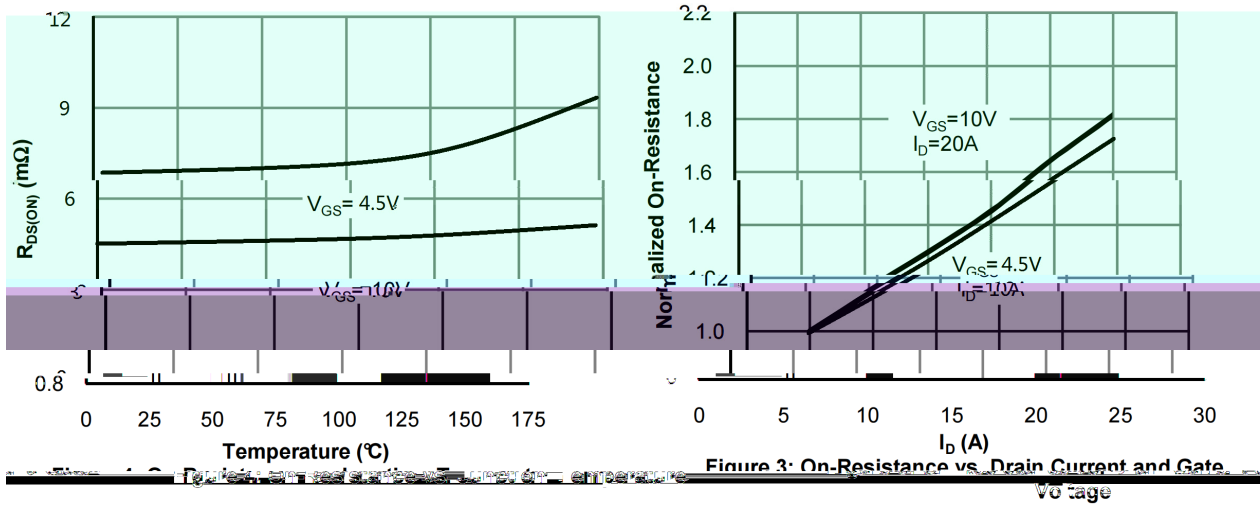
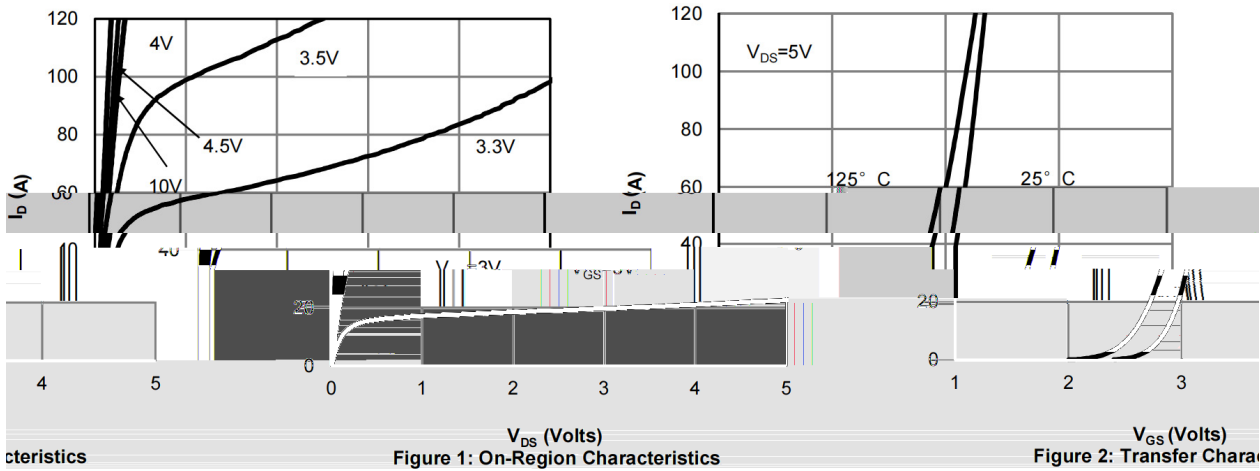
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V I _D =250μA	40			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =40V V _{GS} =0V			1	μA
Gate-Body Leakage Current Forward	I _{GSS}	V _{GS} =±20V V _{DS} =0V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} I _D =250μA	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 V _{GS} =0V f=1MHz		2950		pF
Output Capacitance	C _{oss}			210		
Reverse Transfer Capacitance	C _{rss}			190		

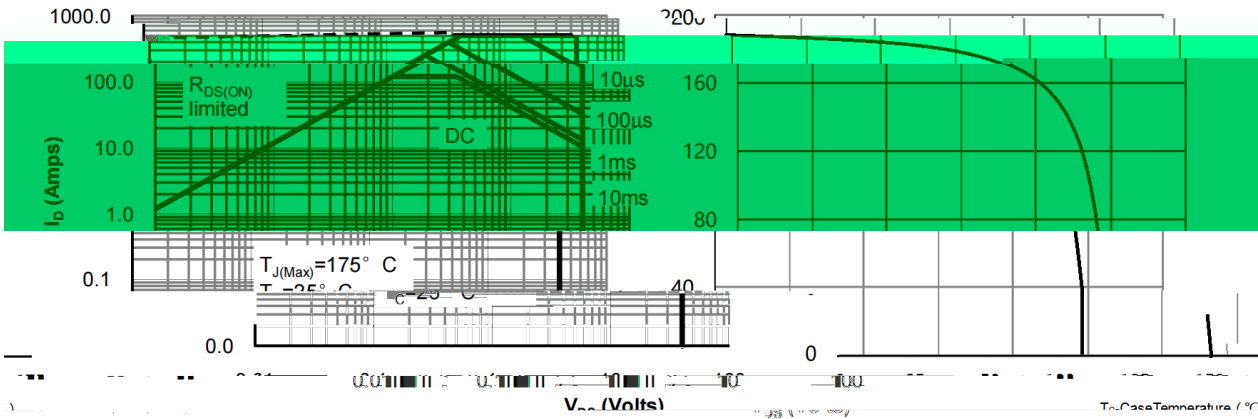
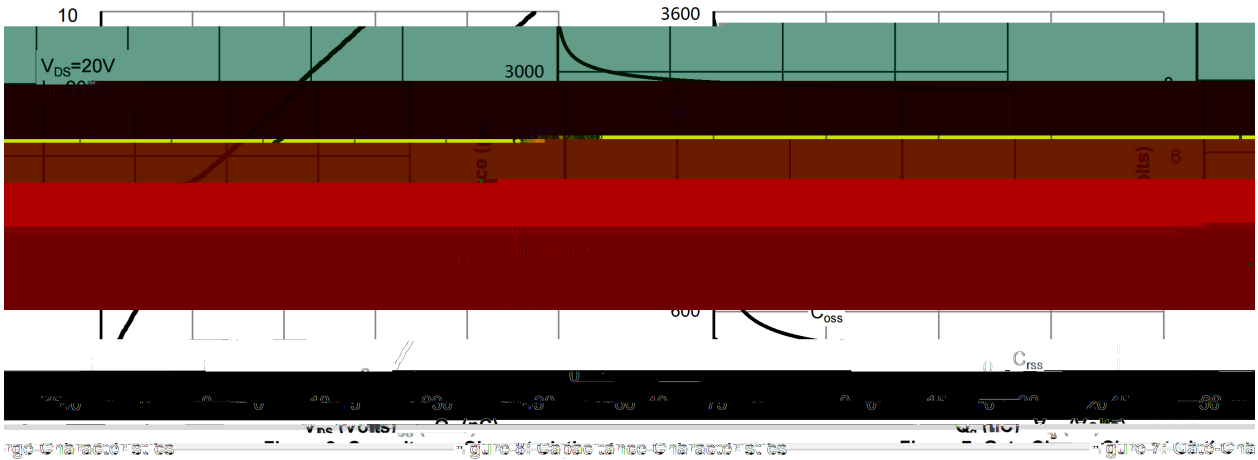
/ Electrical Characteristics(Ta=25)

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		

/ Electrical Characteristic Curve



/ Electrical Characteristic Curve



0. Maximum Continuous Drain Current

Figure 9: Maximum Forward Biased Safe Operating Area

Figure1

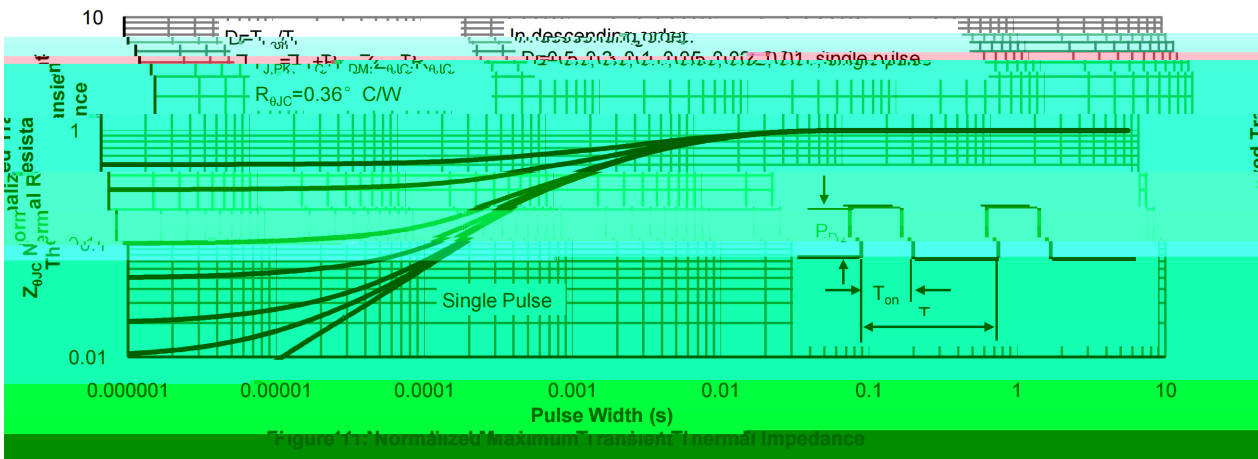
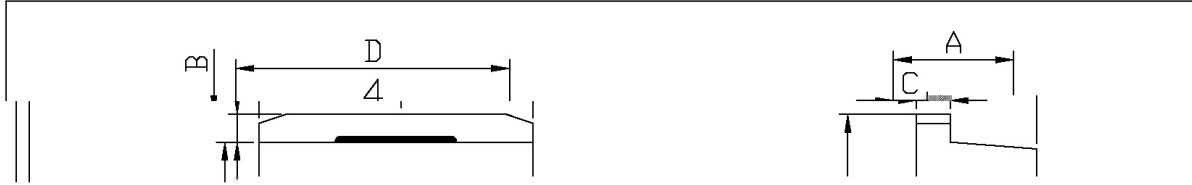


Figure 10: Normalized Maximum Transient Thermal Impedance

/ Package Dimensions

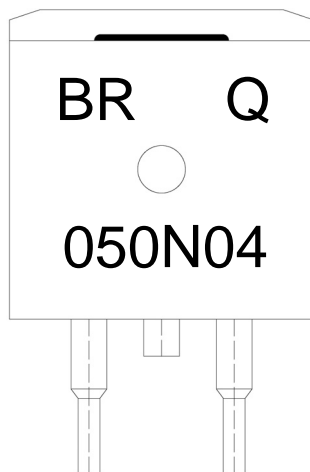


单位: mm

Symbol	Dimensions in Millimeters		Symbol	Dimensions in Millimeter	
	Min	Max		Min	Max
A	4.30	4.70	eL	2.34	2.74
B	1.00	1.40	e2	4.88	5.28
b	0.70	0.90	L1	15.00	16.00
b1	1.15	1.35	L2	2.24	2.84
b2	0.40	0.60	L3	1.20	1.60
C	1.20	1.40			
D	9.80	10.20			

TP-263

/ Marking Instructions



BR

Q

050N04

Note:

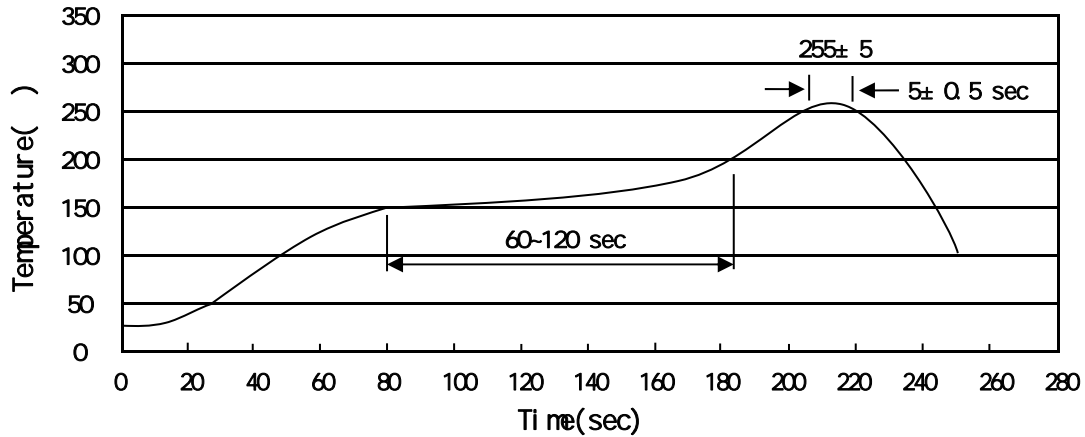
BR: Company Code

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.

/ 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)		
TO-263	800	1	800	6	4,800	13" x24	360x360x50	380x335x366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
TO-263	50	20	1,000	5	5,000	532x33x7.0	555x164x50	575x290x180

/ Notices