V_{DSS}	-60 V
I_D	-80 A
$R_{DS(ON)}$	11mΩ

Features

High switching speed

Improved dv/dt capability

Low Gate Charge

Low reverse transfer capacitance

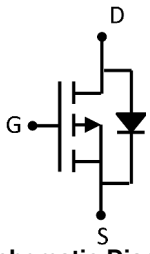
GK XXX
80P06

LOGO GK XXX CODE
80 P 06
ID VDSS

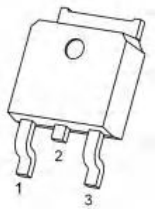
Application

Load Switches, Adaptor Switch

Notebook PCs



Schematic Diagram



TO-263(G:1 D:2 S:3)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current-Continuous（Tc=25℃）	I_D	-80	A
Pulsed Drain Current	I_{DM}	-300	A
Single pulse avalanche energy	E_{AS}	361	mJ
Maximum Power Dissipation（Tc=25℃）	P_D	150	W
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	0.83	℃/W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55~+150	℃

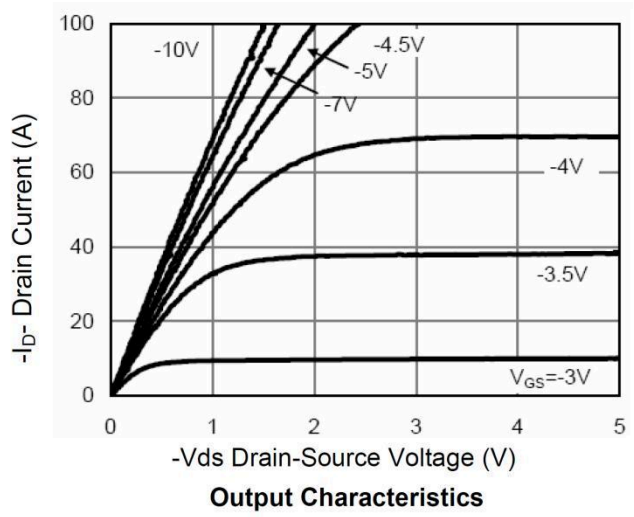
Electrical Characteristics (T_J=25℃unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=-250μA	-60	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-60V,V_{GS}=0V	-	-	-1	μA
Gate-Body Leakage Current	I_{GSS}	V_{GS}=±20V,V_{DS}=0V	-	-	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=-250μA	-1	-	-2.5	V
Drain-Source On-State Resistance	$R_{DS(ON)}$	V_{GS}=-10V, I_D=-20A	-	11	14	mΩ
		V_{GS}=-4.5V, I_D=-10A	-	14	18	mΩ
Dynamic Characteristics						
Input Capacitance	C_{lss}	V_{DS} =-30V, V_{GS} =0V, f = 1MHz	-	7800	-	PF
Output Capacitance	C_{oss}		-	495	-	PF
Reverse Transfer Capacitance	C_{rss}		-	370	-	PF
Switching Characteristics						
Turn-on Delay Time	$td_{(on)}$	V_{DD} =-30V, R_L = 4.7Ω V_{GEN} =-10V,R_{GEN} = 3Ω	-	9.8	-	nS
Turn-on Rise Time	t_r		-	6.1	-	nS
Turn-Off Delay Time	$t_{d(off)}$		-	44	-	nS
Turn-Off Fall Time	t_f		-	12.7	-	nS
Total Gate Charge	Q_g	V_{DS} =-30V, V_{GS} =-10V, I_D =-20A	-	85.5	-	nC
Gate-Source Charge	Q_{gs}		-	12.1	-	nC
Gate-Drain Charge	Q_{gd}		-	23.2	-	nC
Drain-Source Diode Characteristics						
Diode Forward Voltage	V_{SD}	V_{GS}=0V,I_S=-1A	-	-	-1.2	V

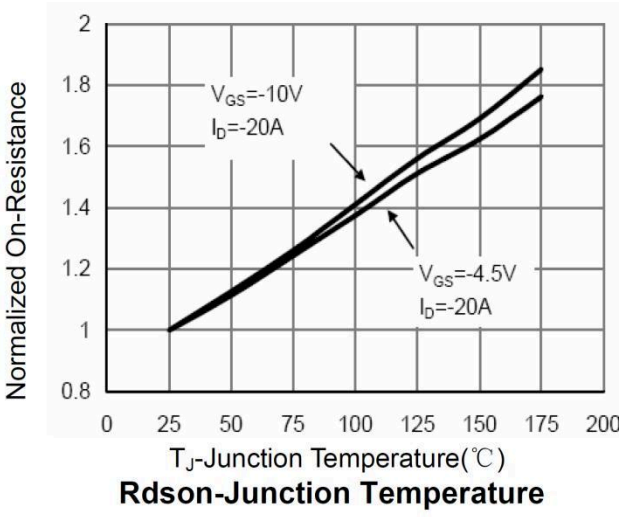
Notes:

1. EAS condition: Tj=25℃,VDD=-30V,VG=-10V,L=0.5mH,Rg=25Ω

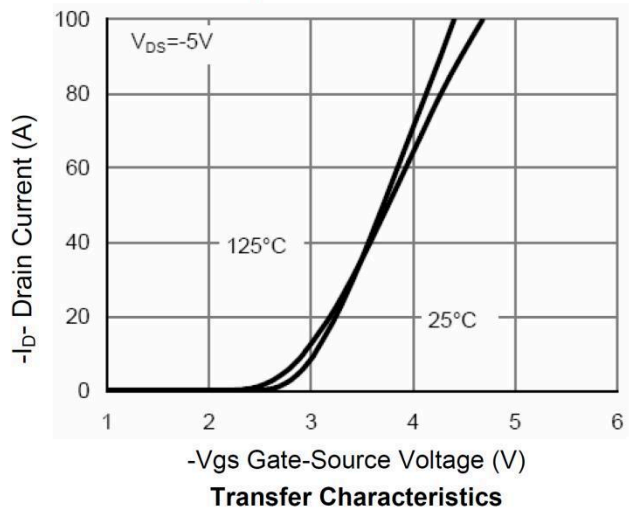
RATING AND CHARACTERISTIC CURVES



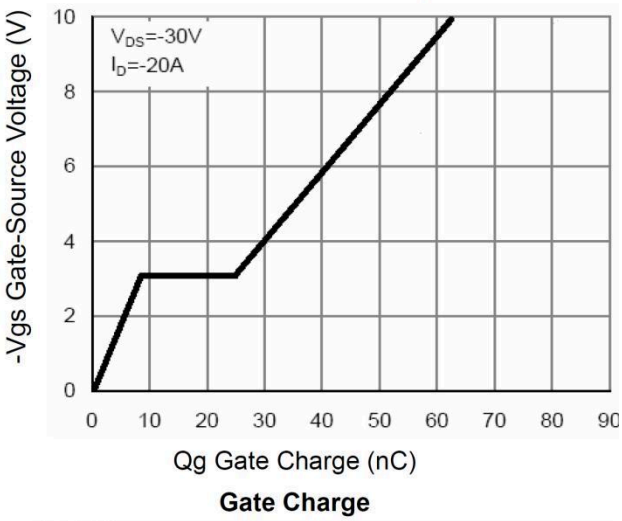
Output Characteristics



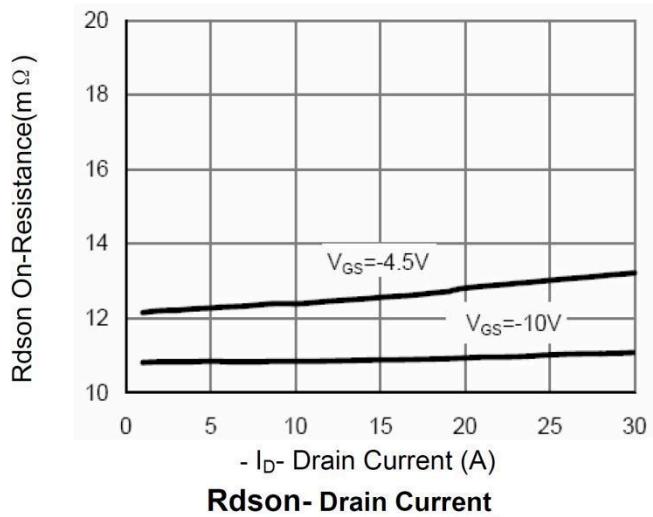
Rdson-Junction Temperature



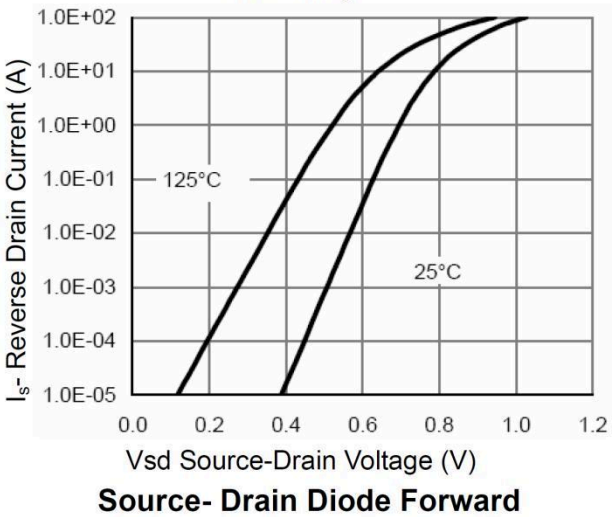
Transfer Characteristics



Gate Charge



Rdson- Drain Current

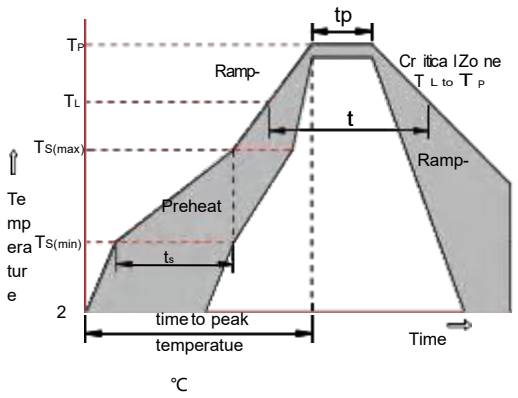


Source- Drain Diode Forward

Soldering parameters

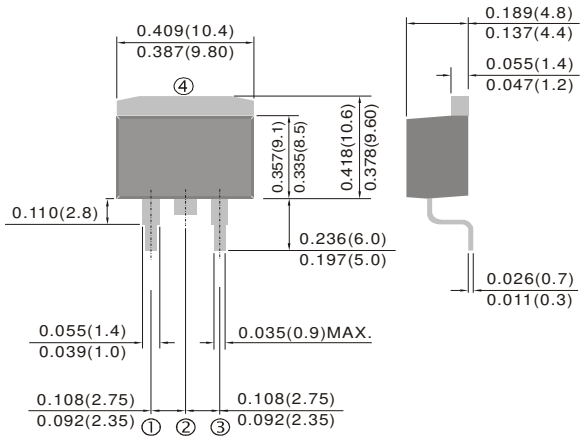
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG5: Reflow condition

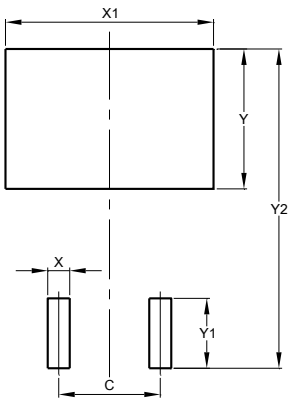


Package Dimensions & Suggested Pad Layout

TO-263 / D²PAK



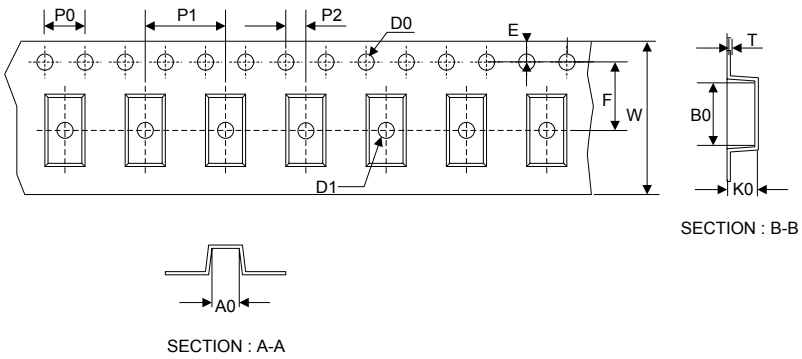
Dimensions in inches and (millimeters)



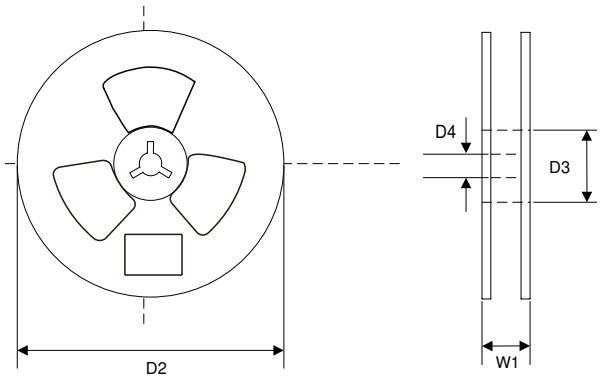
Dimensions	Value (in mm)
C	5.05
X	1.40
X1	11.00
Y	9.20
Y1	4.00
Y2	16.60

Tape & rell specification

Tape



13” Reel



Symbol	Dimension (mm)
P0	4.00±0.20
P1	16.00±0.20
P2	2.00±0.20
D0	1.50±0.20
D1	1.50±0.20
E	1.75±0.15
F	11.50±0.20
W	24.00±0.40
A0	10.50±0.20
B0	16.00±0.25
K0	5.20±0.25
T	0.35±0.10
D2	330.0±5.0
D3	73Min.
D4	14.0±2.5
W1	28.00±2.0
Quantity: 800PCS	