

Dynamic Ratings

Description	Symbol	Conditions	min.	typ.	max.	Unit
Forward Transconductance	g_{fs}	$I_D=3A$ $V_{DS}=25V$	4.5	9.0	-	S
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1MHz$	-	900	1350	pF
Output Capacitance	C_{oss}		-	100	150	
Reverse Transfer Capacitance	C_{rss}		-	5.5	8.5	
Turn-On Time	$t_{d(on)}$	$V_{cc}=600V$ $V_{GS}=10V$	-	12	18	ns
	t_r		-	5.6	8.4	
Turn-Off Time	$t_{d(off)}$	$I_D=3A$ $R_{GS}=10\Omega$	-	38	57	
	t_f		-	11.0	17	
Total Gate Charge	Q_G	$V_{cc}=450V$ $I_D=6A$ $V_{GS}=10V$	-	25	38	nC
Gate-Source Charge	Q_{GS}		-	6.5	9.8	
Gate-Drain Charge	Q_{GD}		-	7.0	10.5	

Reverse Diode

Description	Symbol	Conditions	min.	typ.	max.	Unit
Diode Forward On-Voltage	V_{SD}	$I_F=6.0A$ $V_{GS}=0V$ $T_{ch}=25^\circ C$	-	0.86	1.30	V
Reverse Recovery Time	t_{rr}	$I_F=6.0A$ $V_{GS}=0V$ $-di/dt=100A/\mu s$ $T_{ch}=25^\circ C$	-	1.3	-	μs
Reverse Recovery Charge	Q_{rr}		-	8.0	-	μC

7.Thermal Resistance

Description	Symbol	min.	typ.	max.	Unit
Channel to Case	$R_{th(ch-c)}$			1.786	$^\circ C/W$
Channel to Ambient	$R_{th(ch-a)}$			58	$^\circ C/W$

Note *1 : $T_{ch} \leq 150^\circ C$, See Fig.1 and Fig.2

Note *2 : Starting $T_{ch}=25^\circ C$, $I_{AS}=3.0A$, $L=99mH$, $V_{cc}=50V$, $R_G=50\Omega$, See Fig.1 and Fig.2

E_{AS} limited by maximum channel temperature and avalanche current.
See to the 'Maximum Avalanche Energy' graph of page 17/18.

Note *3 : Repetitive rating : Pulse width limited by maximum channel temperature.
See to the 'Maximum Transient Thermal impedance' graph of page 18/18.

Note *4 : $I_F \leq I_D$, $-di/dt=50A/\mu s$, $V_{cc} \leq BV_{DSS}$, $T_{ch} \leq 150^\circ C$