

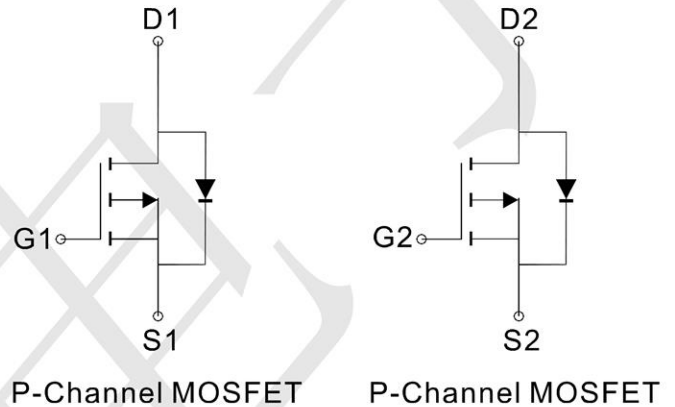
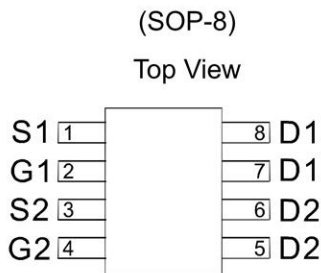
FEATURES

- $R_{DS(ON)} \leq 60m\Omega @ V_{GS} = -10V$ (Max)
- $R_{DS(ON)} \leq 90m\Omega @ V_{GS} = -4.5V$ (Max)

APPLICATIONS

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- DSC
- LCD Display inverter

Package and Pin Configuration



Marking: Q4953

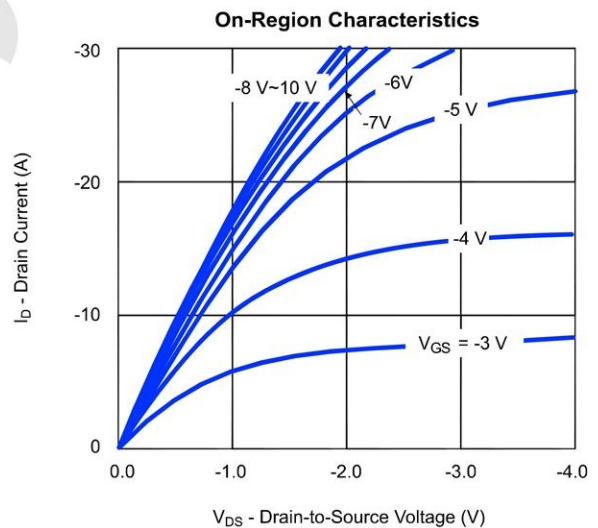
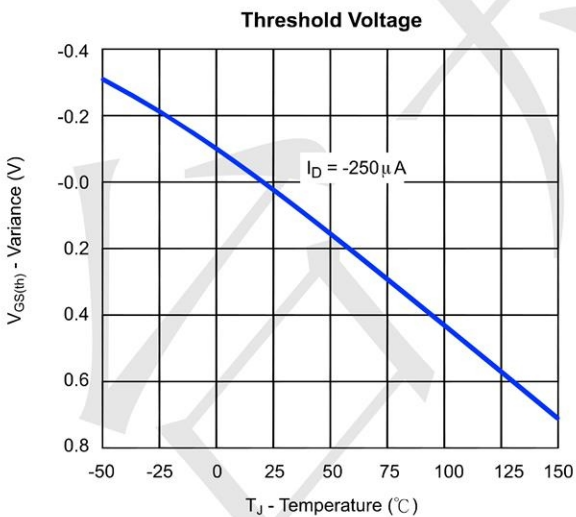
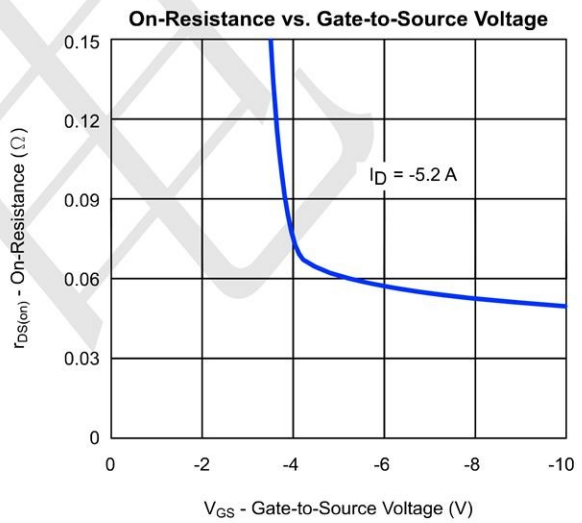
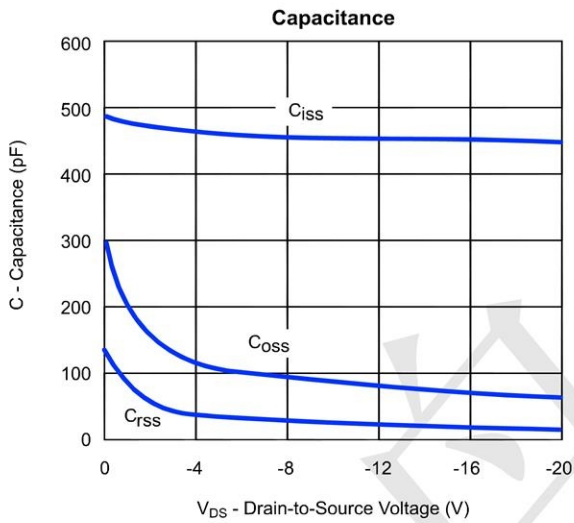
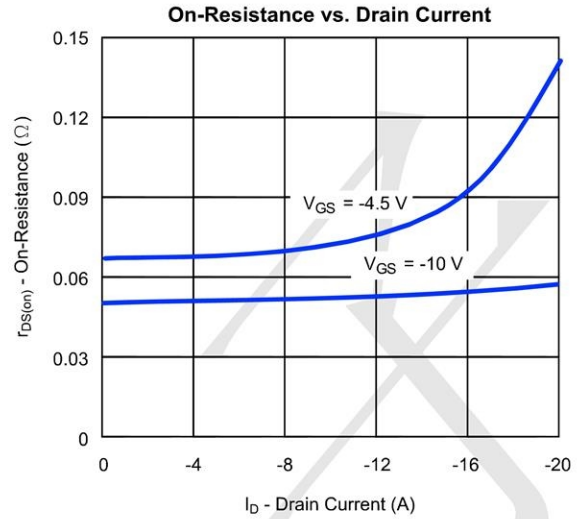
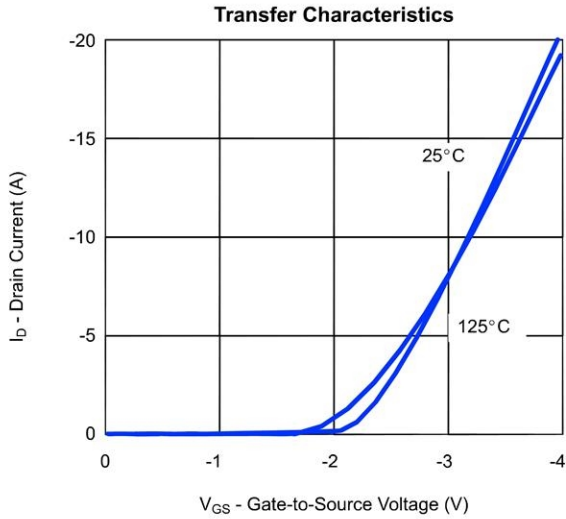
Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise noted)

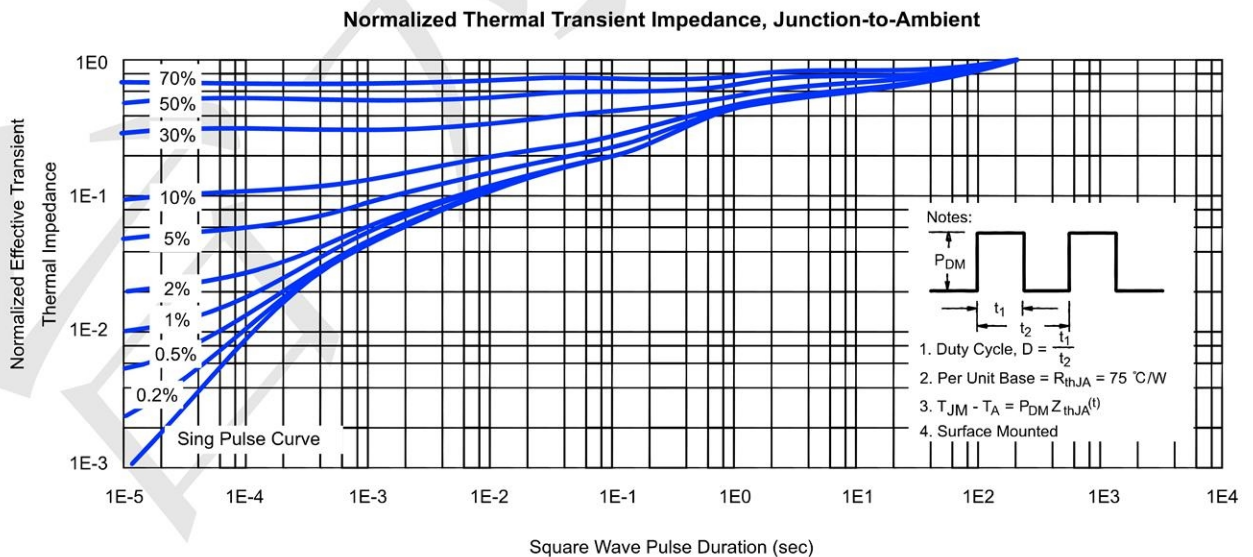
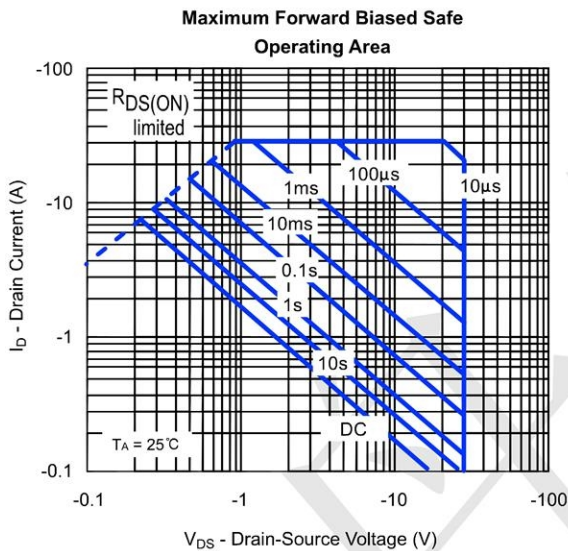
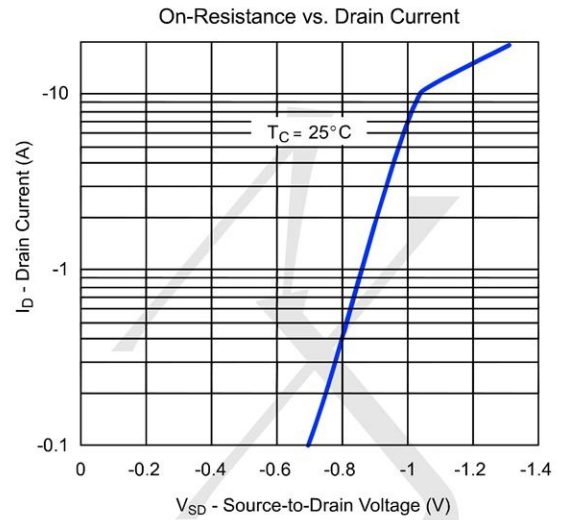
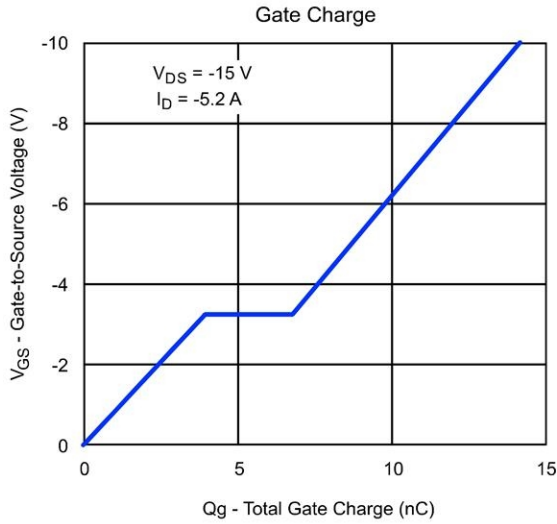
Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DSS}	-30	V
Gate-Source Voltage	V_{GSS}	± 20	V
Continuous Drain Current ($T_j = 150^\circ C$)	I_D	$T_A = 25^\circ C$	-5.3
		$T_A = 70^\circ C$	-4.3
Pulsed Drain Current	I_{DM}	-30	A
Continuous Source Current (Diode Conduction)	I_S	-1.7	A
Maximum Power Dissipation	P_D	$T_A = 25^\circ C$	2.0
		$T_A = 70^\circ C$	1.3
Operating Junction Temperature	T_J	-55 to 150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	$^\circ C$
Thermal Resistance-Junction to Ambient*	$R_{\theta JA}$	$T \leq 10$ sec	47
		Steady State	75
Thermal Resistance-Junction to Case	$R_{\theta JC}$	45	$^\circ C/W$

Electrical Characteristics (T_j=25°C unless otherwise noted)

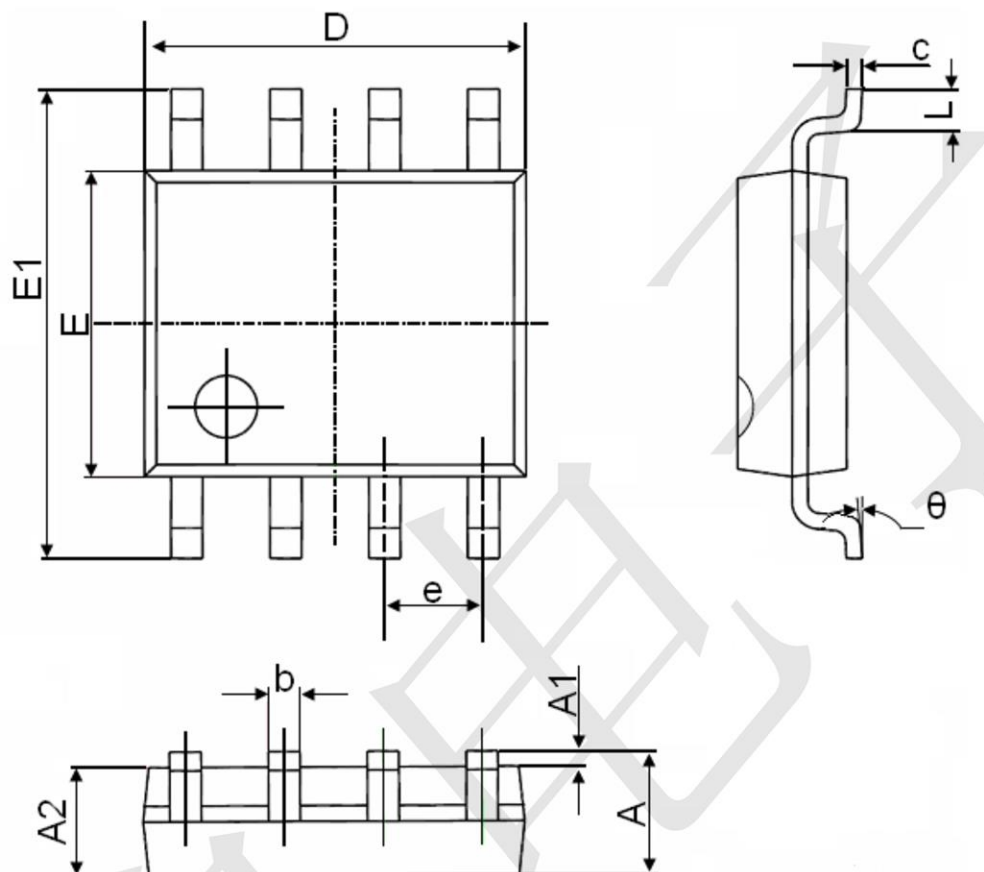
Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250 μA	-1	-1.4	-3	V
I _{GSS}	Gate Leakage Current	V _{DS} =0V, V _{GS} =±20V			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-30V, V _{GS} =0V			-1	μA
		V _{DS} =-30V, V _{GS} =0V T _J =55°C			-25	
R _{DS(ON)}	Drain-Source On-Resistance	V _{GS} =-10V, I _D = -5.3A		50	60	mΩ
		V _{GS} =-4.5V, I _D = -4.2A		69	90	
V _{SD}	Diode Forward Voltage	I _S =-1.7A, V _{GS} =0V		-0.8	-1.2	V
DYNAMIC						
R _g	Gate resistance	V _{DS} =0V, V _{GS} =0V, f=1MHz		3.5		Ω
C _{iss}	Input capacitance	V _{DS} =-15V, V _{GS} =0V, f=1.0MHz		450	490	pF
C _{oss}	Output Capacitance			70		
C _{rss}	Reverse Transfer Capacitance			20		
Q _g	Total Gate Charge	V _{DS} =-15V, V _{GS} =-10V, I _D =-5.3A		14	17	nC
Q _{gs}	Gate-Source Charge			4		
Q _{gd}	Gate-Drain Charge			3		
t _{d(on)}	Turn-On Delay Time	V _{DD} =-15V, R _L =15Ω I _D =-1.0A, V _{GEN} =-10V R _G =6Ω		27	33	ns
t _r	Turn-On Rise Time			11	15	
t _{d(off)}	Turn-Off Delay Time			40	52	
t _f	Turn-Off Fall Time			4	6	

Typical Electrical and Thermal Characteristics





SOP-8 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

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