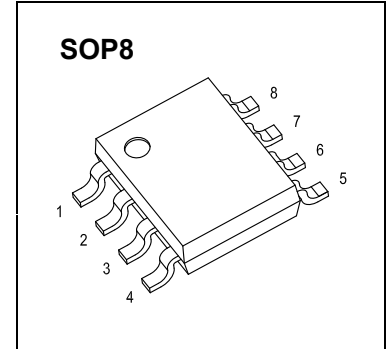


SOP8 Plastic-Encapsulate MOSFETS

CJQ4953 P-Channel 30-V(D-S) MOSFET

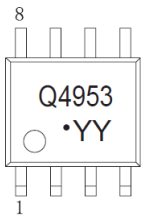
$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-30V	60mΩ@-10V	-5A
	90mΩ@-4.5V	



FEATURE

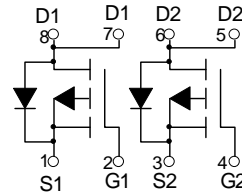
- Surface Mount Package
- Super High Density Cell Design for Extremely Low $R_{DS(ON)}$

MARKING:



Q4953= Device code
 YY=Date Code
 Solid dot = Pin1 indicator
 Solid dot = Green molding compound device, if none,the normal device.

Equivalent Circuit



Maximum ratings ($T_a=25^{\circ}C$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	
Continuous Drain Current ($t \leq 10s$)	I_D	-5	A
Power Dissipation ($t \leq 10s$)	P_D	1.25	W
Thermal Resistance from Junction to Ambient ($t \leq 10s$)	$R_{\theta JA}$	100	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55~+150	

MOSFET ELECTRICAL CHARACTERISTICS

$T_a=25\text{ }^\circ\text{C}$ unless otherwise specified

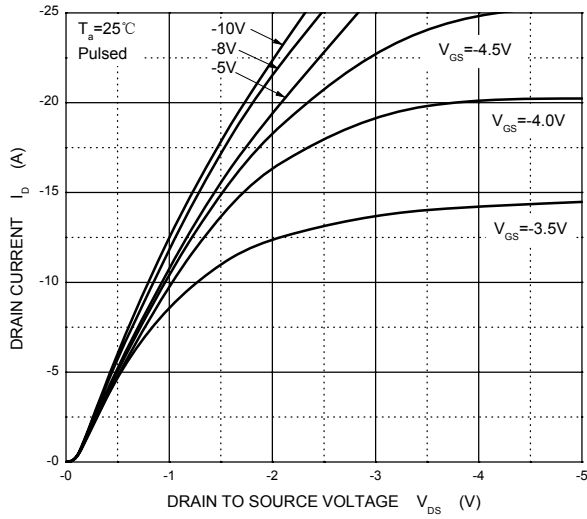
Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-30			V
Gate-threshold voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1.0	-1.5		V
Gate-body leakage	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Zero gate voltage drain current	I_{DSS}	$V_{DS}=-30V, V_{GS}=0V$			-1	μA
Drain-source on-resistance ^a	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-4.9A$		50	60	m Ω
		$V_{GS}=-4.5V, I_D=-3.7A$		66	90	
Forward transconductance ^a	g_{fs}	$V_{DS}=-10V, I_D=-4.9A$	6.0			S
Diode forward voltage ^a	V_{SD}	$I_S=-1.7A, V_{GS}=0V$			-1.2	V
Dynamic^b						
Total gate charge	Q_g	$V_{DS}=-15V, V_{GS}=-10V, I_D=-4.9A$			25	nC
Gate-source charge	Q_{gs}			4		
Gate-drain charge	Q_{gd}			2		
Turn-on delay time	$t_{d(on)}$	$V_{DD}=-15V, R_L=15\Omega, I_D\approx -1A,$ $V_{GEN}=-10V, R_G=6\Omega$			15	nS
Rise time	t_r				20	
Turn-off delay time	$t_{d(off)}$				80	
Fall time	t_f				40	

Notes :

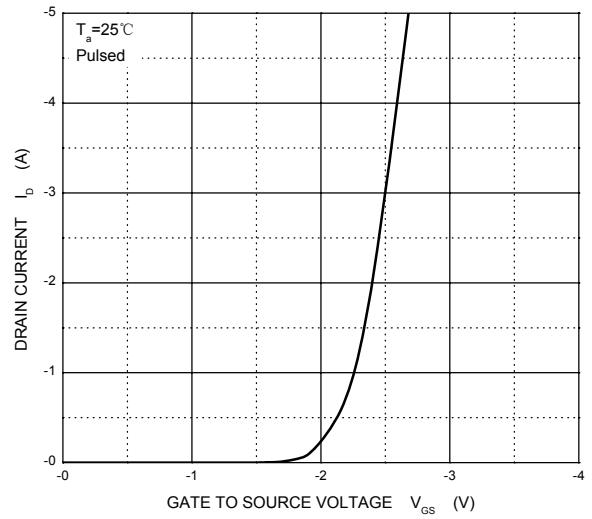
- a. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
- b. Guaranteed by design, not subject to production testing.

Typical Characteristics

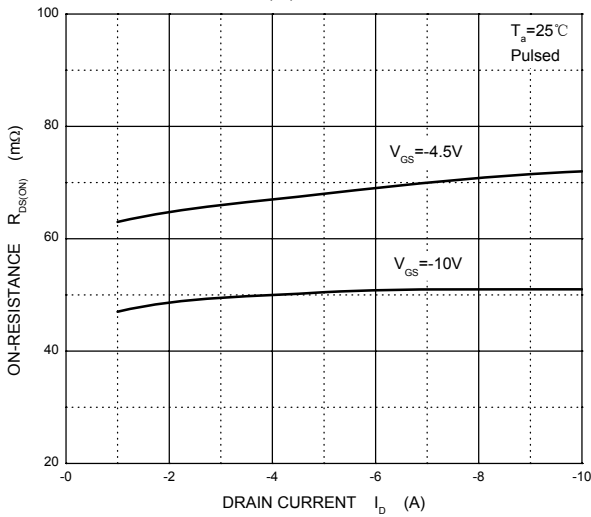
Output Characteristics



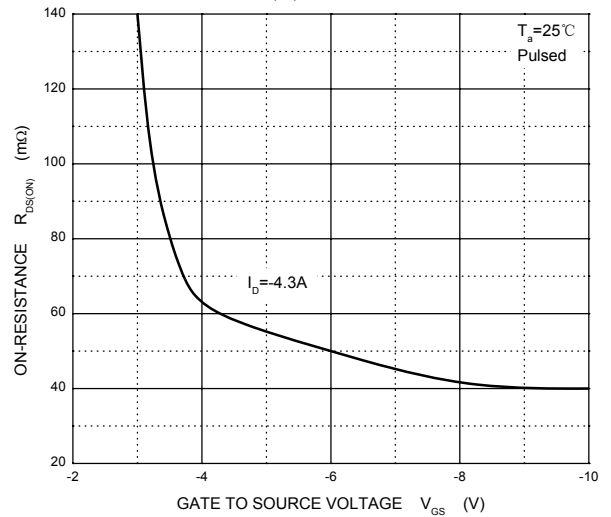
Transfer Characteristics



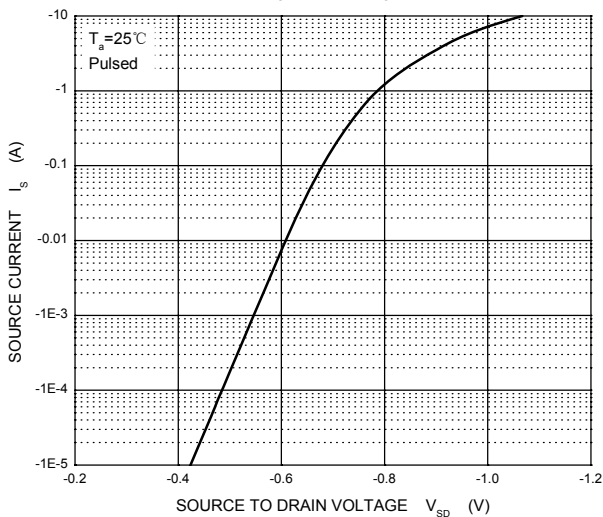
$R_{DS(ON)}$ — I_D



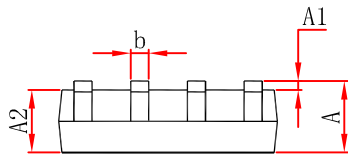
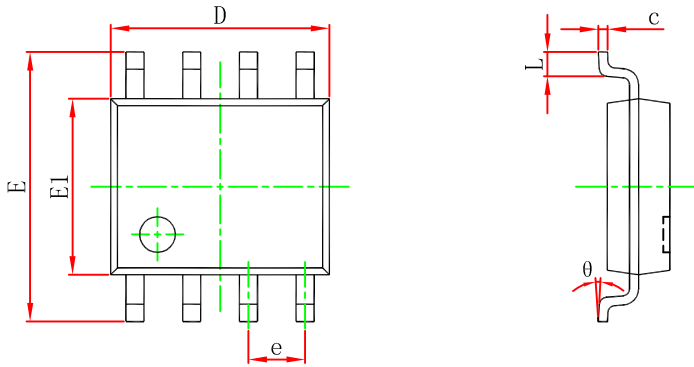
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

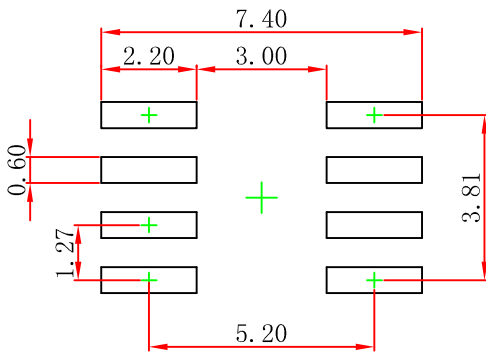


SOP8 Package Outline Dimensions



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	0.007	0.010
D	4.800	5.000	0.189	0.197
e	1.270 (BSC)		0.050 (BSC)	
E	5.800	6.200	0.228	0.244
E1	3.800	4.000	0.150	0.157
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

SOP8 Suggested Pad Layout



Note:

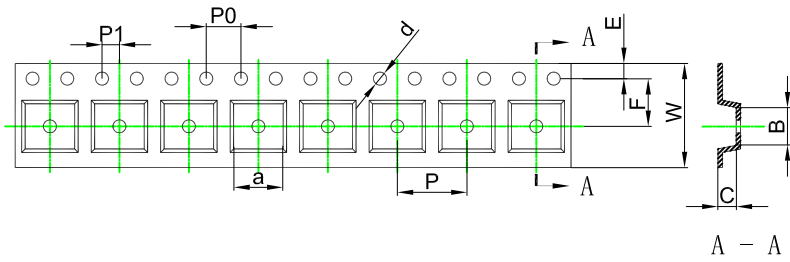
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

SOP8 Tape and Reel

SOP8 Embossed Carrier Tape



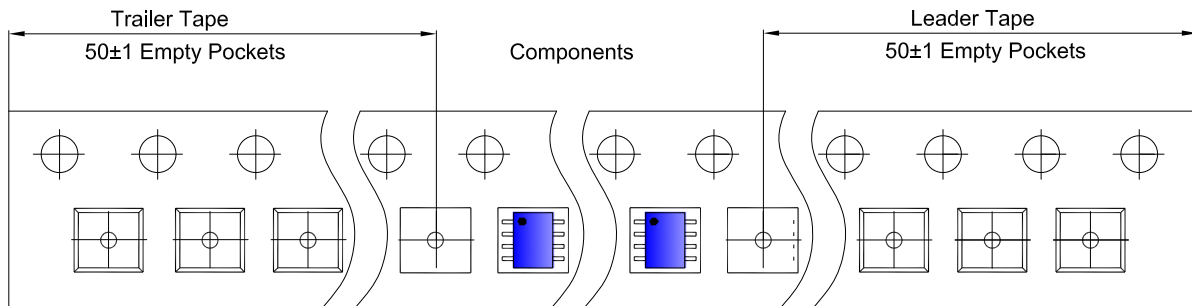
Packaging Description:

SOP8 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 2,500 units per 13" or 33cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

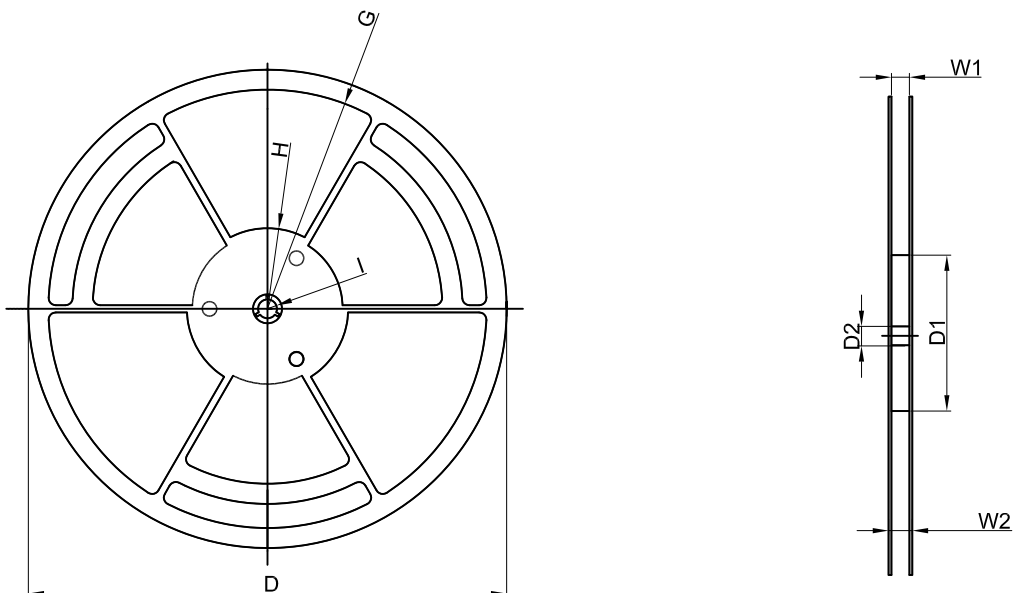
ALL DIM IN mm

Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOP8	6.40	5.40	2.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

SOP8 Tape Leader and Trailer



SOP8 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
13" Dia	Ø330.00	100.00	13.00	R151.00	R56.00	R6.50	12.40	17.60

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
4,000 pcs	13 inch	8,000 pcs	360×360×65	64,000 pcs	565×380×390	