SZCJ

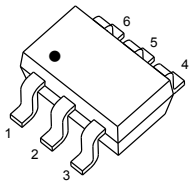
Shenzhen Changji Semiconductor Co., LTD.

SOT-363 Plastic-Encapsulate MOSFETs

2N7002DW Dual N-channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
60V	5Ω@10V	115mA
	7Ω@5V	

SOT-363



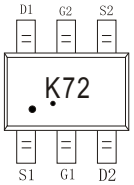
FEATURE

- High density cell design for low $R_{DS(ON)}$
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability

APPLICATION

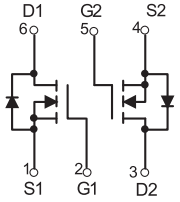
- Load Switch for Portable Devices
- DC/DC Converter

MARKING



K72=Device code
Solid dot1=Pin1 indicator
Solid dot2= Green molding compound device.

Equivalent Circuit



MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source voltage	60	V
V_{GS}	Gate-Source voltage	±20	V
I_D	Drain Current	115	mA
P_D	Power Dissipation	150	mW
$R_{\Theta JA}$	Thermal Resistance from Junction to Ambient	833	℃/W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

MOSFET ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS}=0 V, I_D=250 μA	60			V
Gate-threshold voltage *	$V_{th(GS)}$	V_{DS}=V_{GS}, I_D=250 μA	1	1.6	2.5	
Gate-body leakage	I_{GSS}	V_{DS}=0 V, V_{GS}=±20 V			±80	nA
Zero gate voltage drain current	I_{DSS}	V_{DS}=60 V, V_{GS}=0 V			80	nA
Drain-source on-resistance *	$R_{DS(on)}$	V_{GS}=10 V, I_D=500mA		1.1	5	Ω
		V_{GS}=5 V, I_D=50mA		1.2	7	
Forward transconductance *	g_{fs}	V_{DS}=10 V, I_D=200mA	80			ms
Drain-source on-voltage *	$V_{DS(on)}$	V_{GS}=10V, I_D=500mA			3.75	V
		V_{GS}=5V, I_D=50mA			0.375	V
Diode forward voltage	V_{SD}	I_S=115mA, V_{GS}=0 V	0.55		1.2	V
Input capacitance **	C_{iss}	V_{DS}=25V, V_{GS}=0V, f=1MHz			50	pF
Output capacitance **	C_{oss}				25	
Reverse transfer capacitance **	C_{rss}				5	

SWITCHING TIME

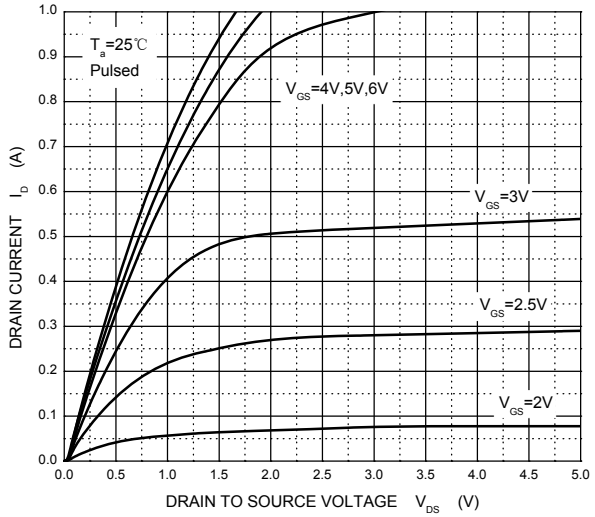
Turn-on time **	$t_{d(on)}$	V_{DD}=25 V, R_L=50Ω			20	ns
Turn-off time **	$t_{d(off)}$	I_D=500mA,V_{GEN}=10V,$_G$=25 Ω			40	

* Pulse Test: Pulse width ≤300μs,duty cycle≤2%.

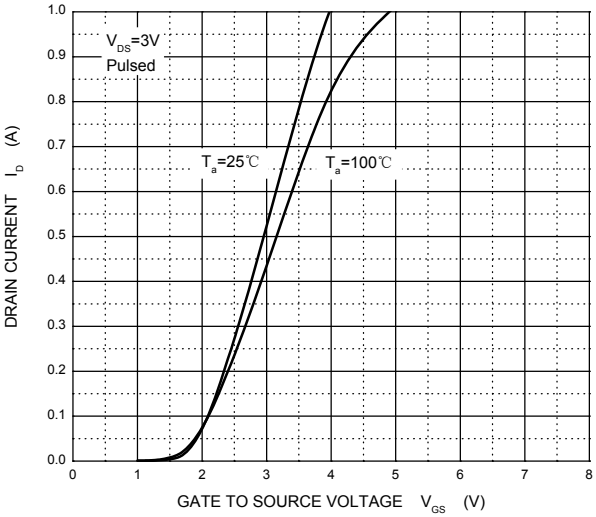
** These parameters have no way to verify.

Typical Characteristics

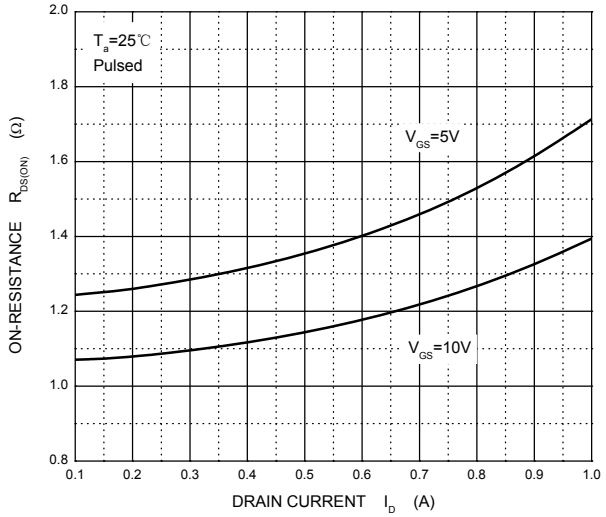
Output Characteristics



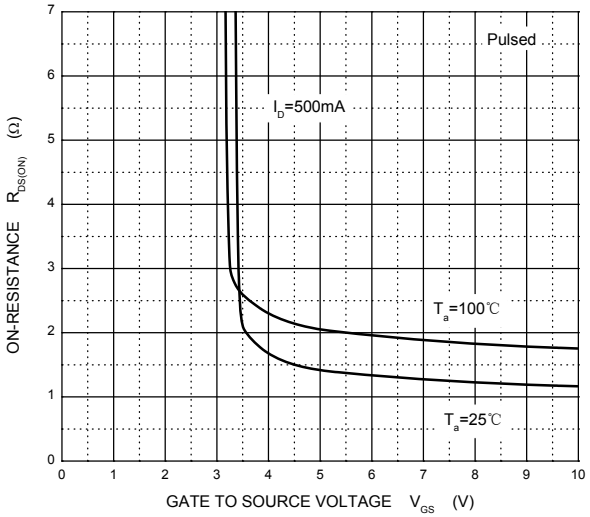
Transfer Characteristics



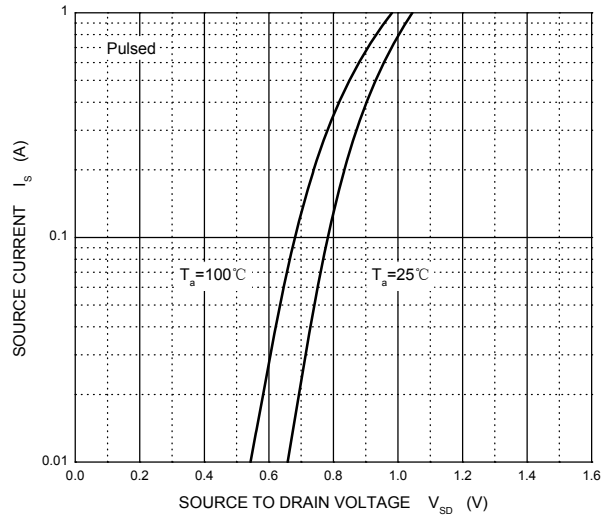
$R_{DS(ON)}$ —— I_D



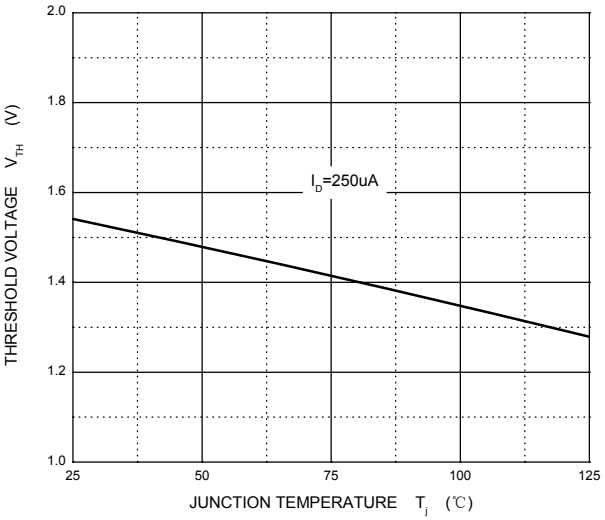
$R_{DS(ON)}$ —— V_{GS}



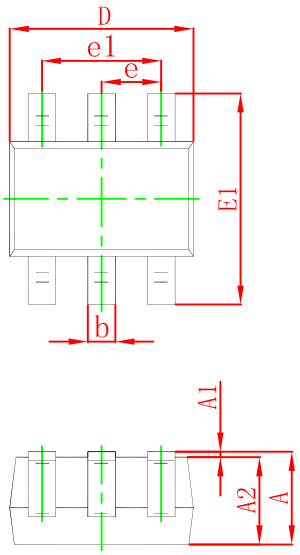
I_S —— V_{SD}



Threshold Voltage

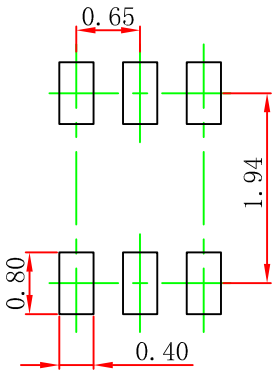


SOT-363 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-363 Suggested Pad Layout



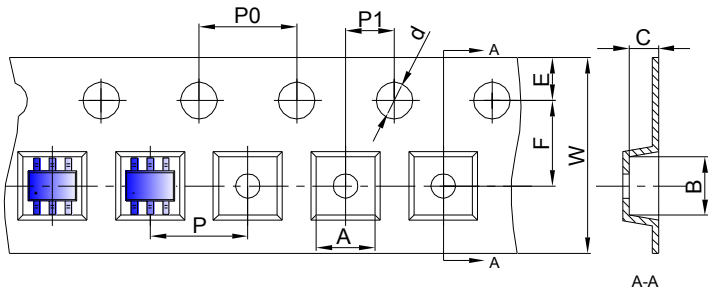
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

NOTICE

SZCJ reserve the right to make modifications,enhan ts,improvements,corrections or other c s without turther notice to any product herein. SZCJ oes not assume any liability arising out of the application or use of any product described .

SOT-363 Tape and reel

SOT-363 Embossed Carrier Tape

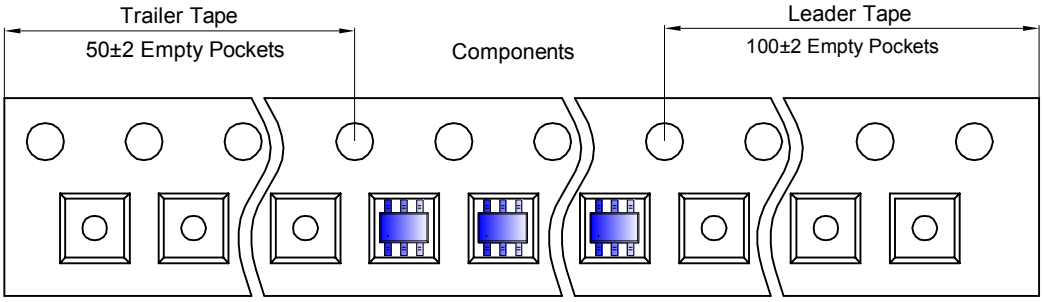


Packaging Description:

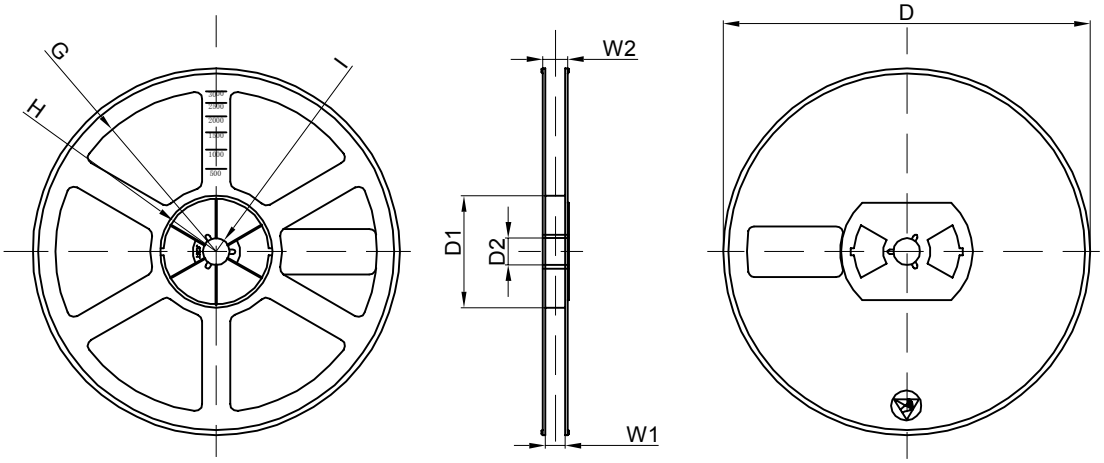
SOT-363 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-363 Tape Leader and Trailer



SOT-363 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	