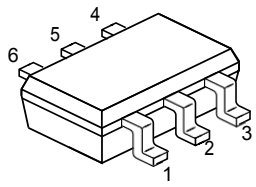
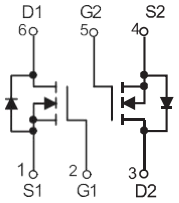
Dual N-Channel Enhancement Mode Field Effect Transistor

SOT-363



MOSFET1: 1,2,6
MOSFET2: 3,4,5



FEATURES

- Low on-resistance:V_{DS}=60V,I_D=115mA,$R_{DS(ON)}$≤5Ω@V_{GS}=10V
- High density cell design for low $R_{DS(ON)}$
- Voltage controlled small signal switch
- High saturation current capability
- Rugged and reliable

MECHANICAL DATA

- Case: SOT-363
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.3 grams (approximate)
- Marking: K72

MAXIMUM RATINGS (T_A = 25°C 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	V
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=50 Ω			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.

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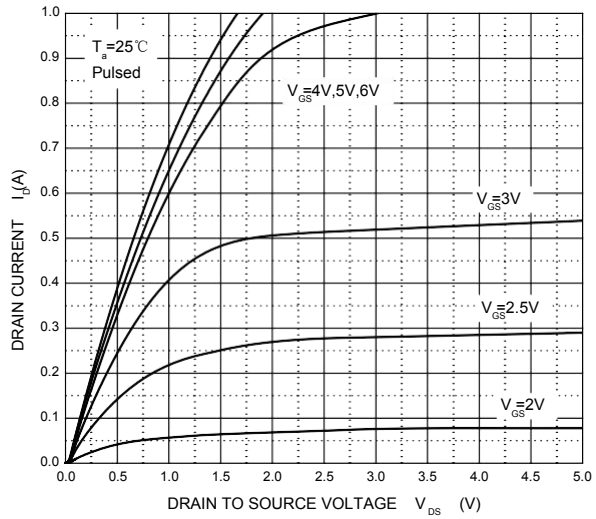
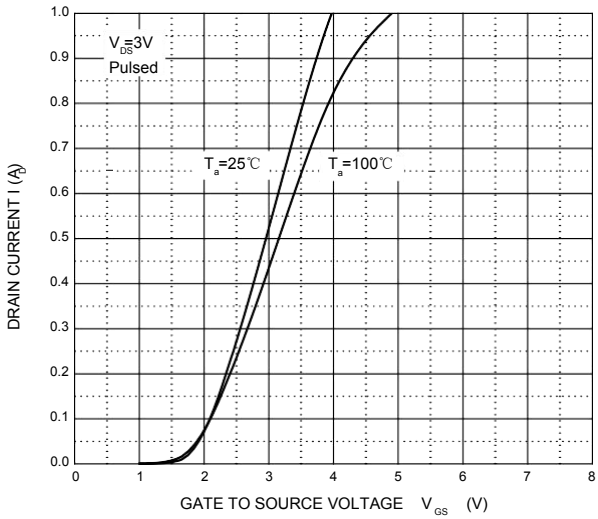
Typical Characteristics

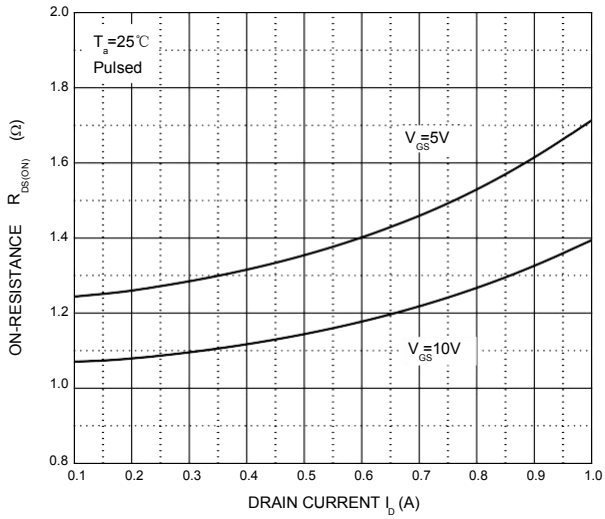
Output Characteristics



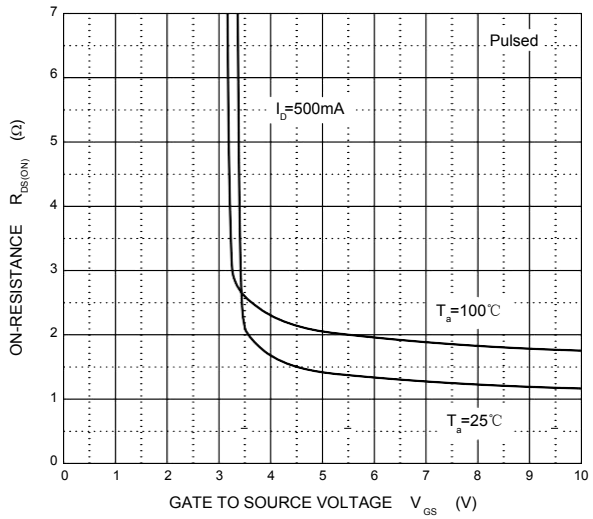
Transfer Characteristics



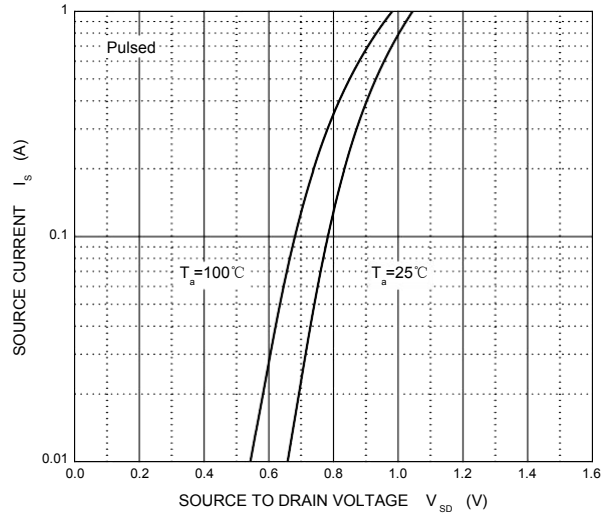
$R_{DS(ON)}$ —— I_D



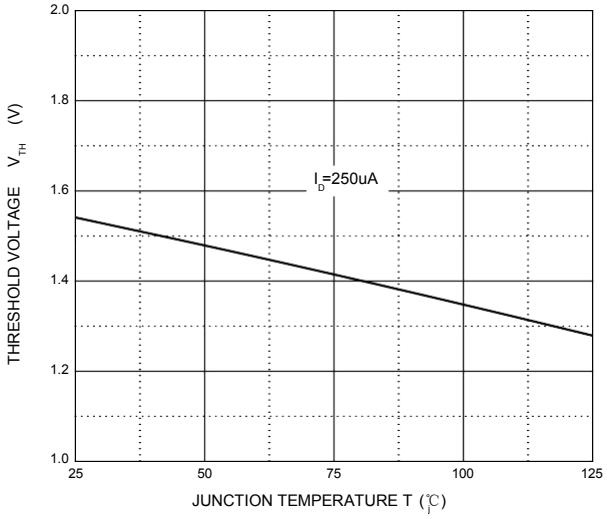
$R_{DS(ON)}$ —— V_{GS}



I_S —— V_{SD}



Threshold Voltage



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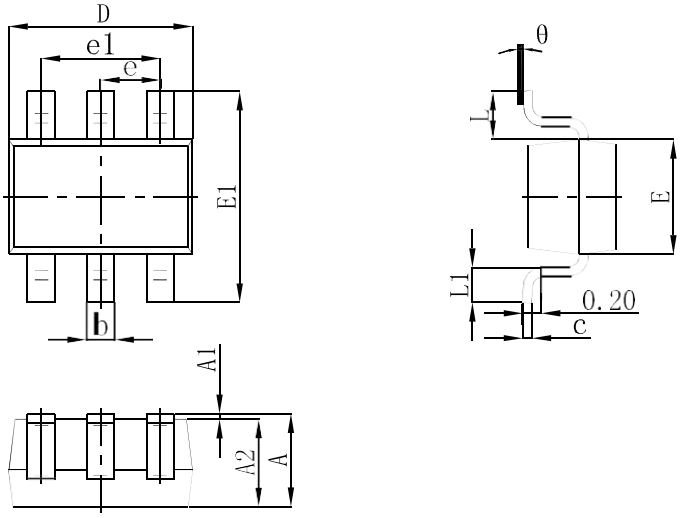
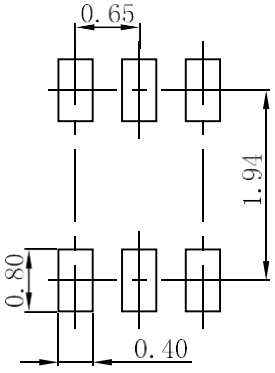
SOT-363 Package Outline Dimensions



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.

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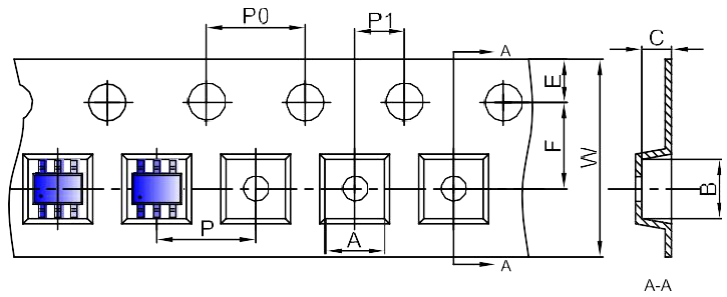
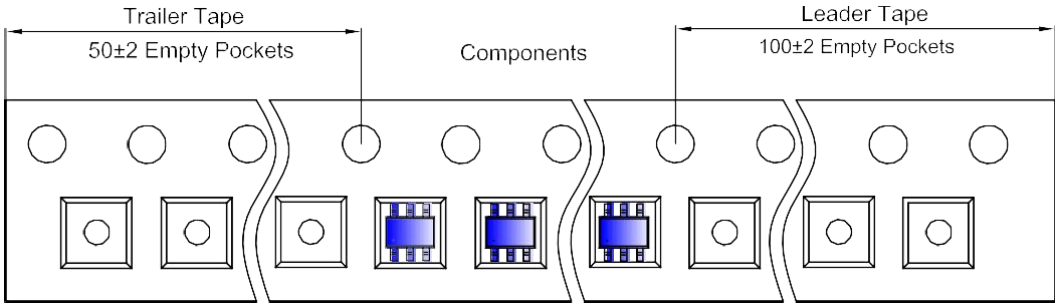
SOT-363 Embossed Carrier Tape

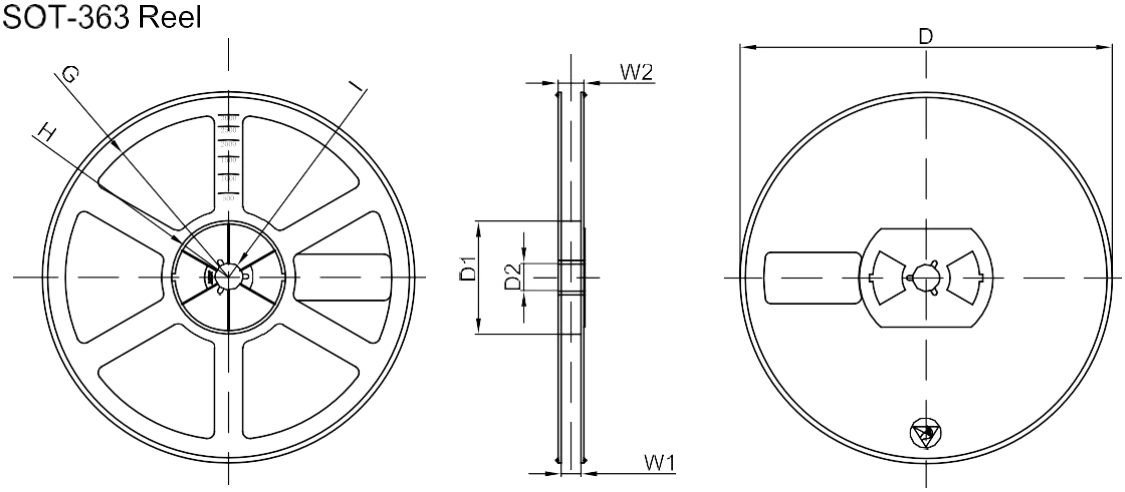


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

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