

SOT-363 Plastic-Encapsulate MOSFETS

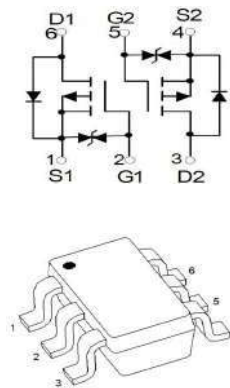
50V Dual P-Channel MOSFET

Features

- Low On-Resistance
- Low Gate Threshold Voltage
- Low Input Capacitance
- Fast Switching Speed

Marking Code: K84

SOT-363



Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Units
Drain-Source Voltage	V_{DS}	-50	V
Drain-Gate Voltage (Note 1)	V_{DGR}	-50	V
Gate-Source Voltage Continuous	V_{GS}	20	V
Drain Current (Note 2) Continuous	I_D	-130	mA
Total Power Dissipation (Note 2)	P_d	300	mW
Thermal Resistance, Junction to Ambient	R_{JA}	417	C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	C

Note: 1. $R_{GS} = 20K$.

Typical Characteristics

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 4)						
Drain-Source Breakdown Voltage	BV _{DSS}	-50	-75		V	V _{GS} = 0V, I _D = -250 A
Zero Gate Voltage Drain Current	I _{DSS}			-15	μA	V _{DS} = -50V, V _{GS} = 0V, T _J = 25 C
				-60	μA	V _{DS} = -50V, V _{GS} = 0V, T _J = 125 C
Gate-Body Leakage	I _{GSS}			10	uA	V _{GS} = 20V, V _{DS} = 0V
ON CHARACTERISTICS (Note 4)						
Gate Threshold Voltage	V _{GS(th)}	-0.8	-1.6	-2.0	V	V _{DS} = V _{GS} , I _D = -1mA
Static Drain-Source On-Resistance	R _{DS (ON)}		6	10		V _{GS} = -5V, I _D = -0.100A
Forward Transconductance	g _{FS}	0.05			S	V _{DS} = -25V, I _D = -0.1A
DYNAMIC CHARACTERISTICS						
Input Capacitance	C _{iss}			45	pF	V _{DS} = -25V, V _{GS} = 0V f = 1.0MHz
Output Capacitance	C _{oss}			25	pF	
Reverse Transfer Capacitance	C _{rss}			12	pF	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	t _{D(ON)}		10		ns	V _{DD} = -30V, I _D = -0.27A, R _{GEN} = 50 , V _{GS} = -10V
Turn-Off Delay Time	t _{D(OFF)}		18		ns	

Typical Characteristics

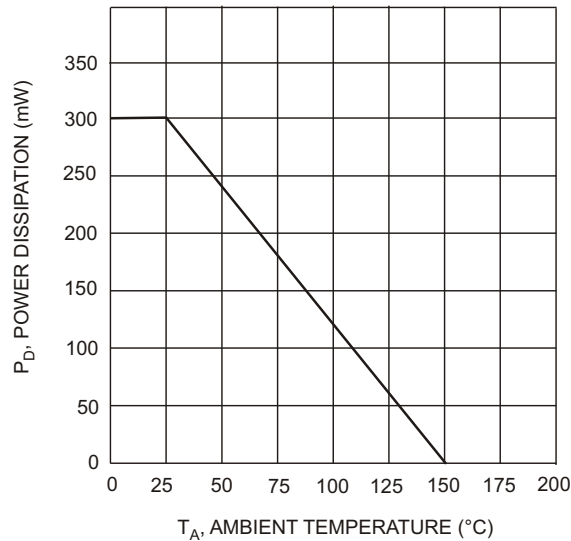


Fig. 1, Max Power Dissipation vs Ambient Temperature

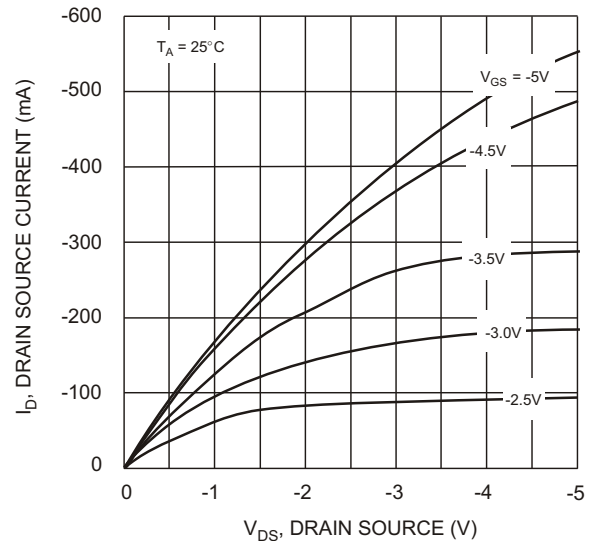


Fig. 2, Drain Source Current vs. Drain Source Voltage

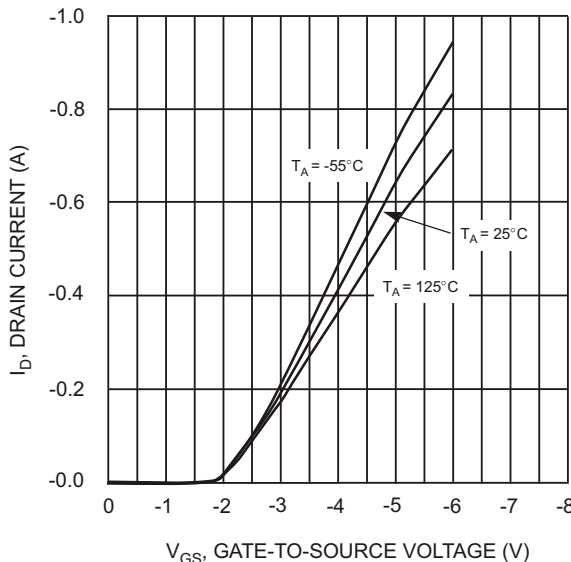


Fig. 3, Drain Current vs. Gate Source Voltage

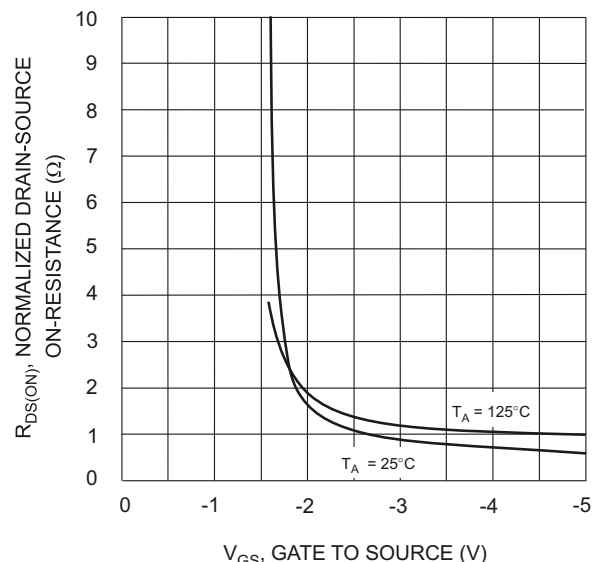


Fig. 4, On Resistance vs. Gate Source Voltage

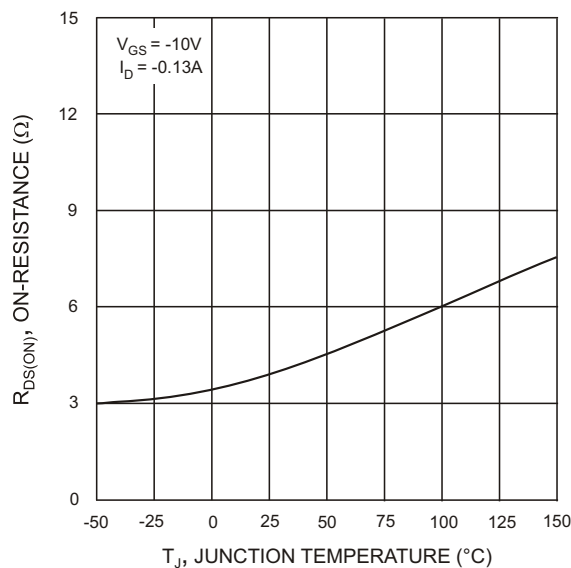


Fig. 5, On-Resistance vs. Junction Temperature

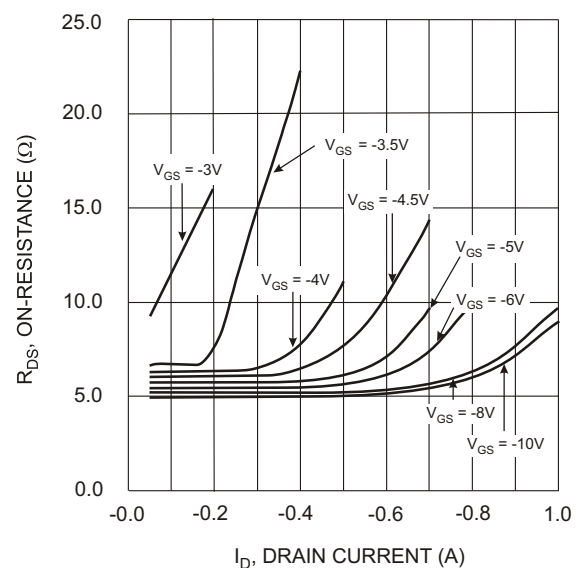
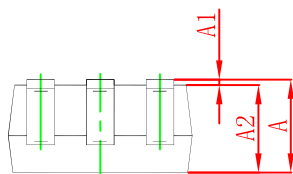
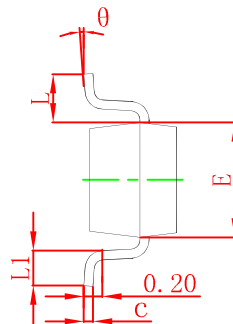
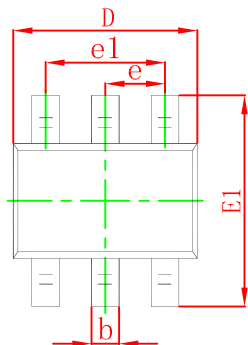


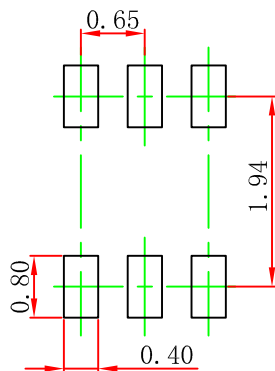
Fig. 6, On-Resistance vs. Drain Current

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

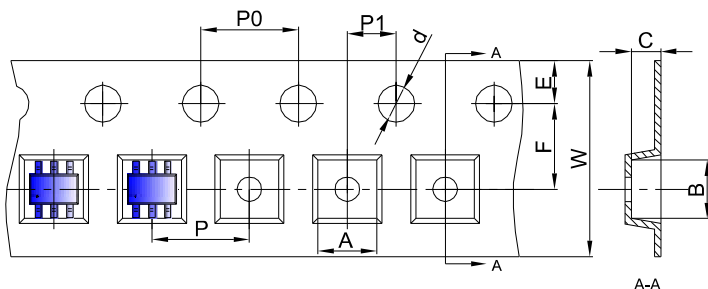


Note:

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

SOT-363 Tape and reel

SOT-363 Embossed Carrier Tape

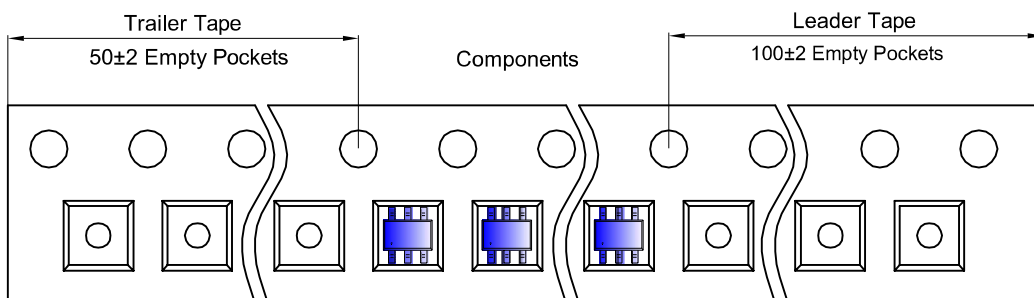


Packaging Description:

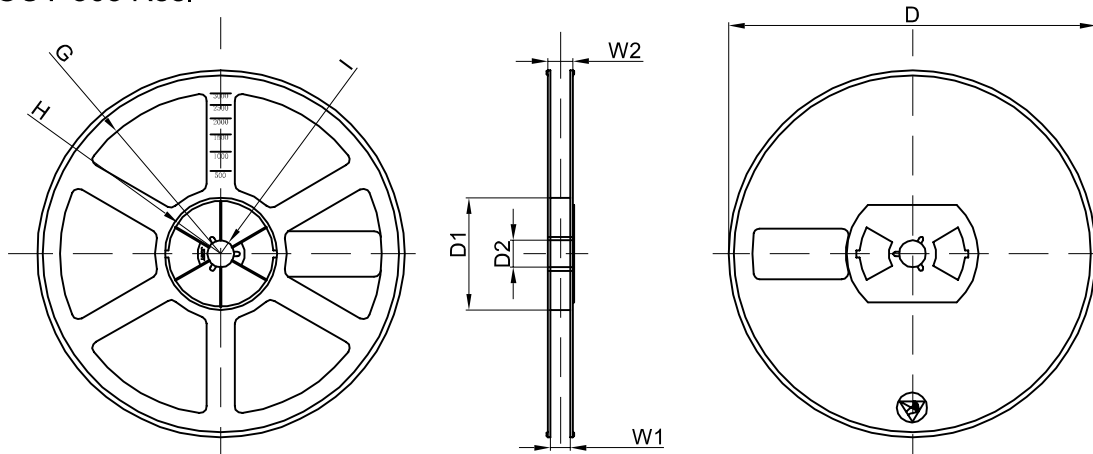
SOT-363 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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	30,000 pcs	203×203×195	120,000 pcs	438×438×220	