

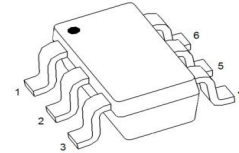
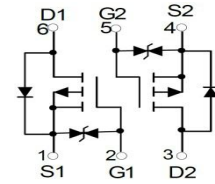


BSS84KDW

Features

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

Marking Code: K84



SOT-363

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

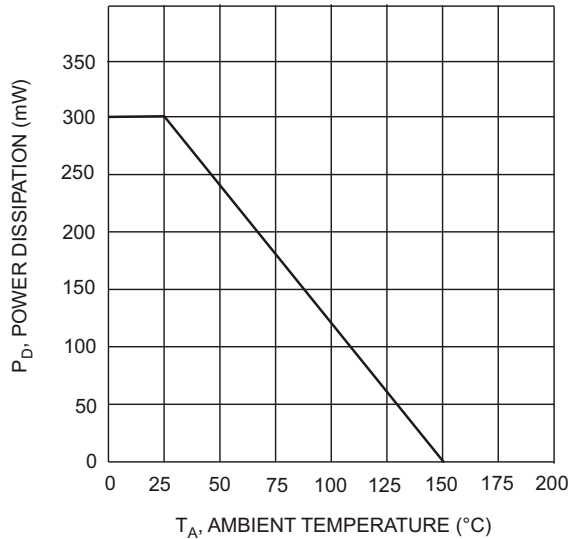
Characteristic	Symbol	Value	Units
Drain-Source Voltage	V_{DSS}	-50	V
Drain-Gate Voltage (Note 1)	V_{DGR}	-50	V
Gate-Source Voltage	V_{GSS}	20	V
Drain Current (Note 2)	I_D	-130	mA
Total Power Dissipation (Note 2)	P_d	300	mW
Thermal Resistance, Junction to Ambient	R_{JA}	417	C/W
Operating and Storage Temperature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

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



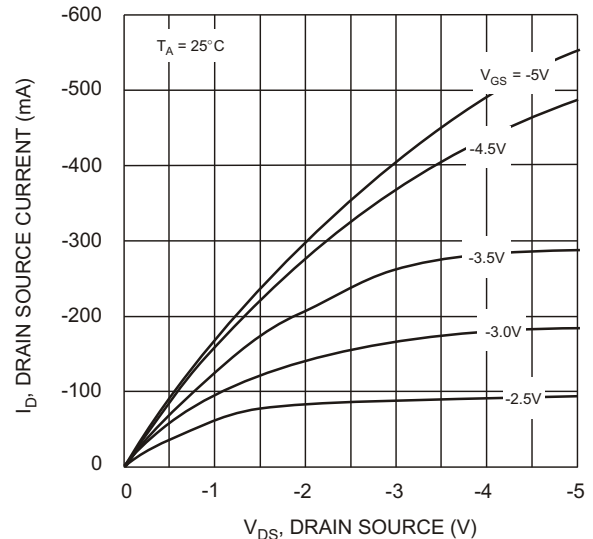
Electrical Characteristics @ $T_A = 25\text{ C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
OFF CHARACTERISTICS (Note 4)						
Drain-Source Breakdown Voltage	BV_{DSS}	-50	-75		V	$V_{GS} = 0V, I_D = -250\text{ A}$
Zero Gate Voltage Drain Current	I_{DSS}			-15	μA	$V_{DS} = -50V, V_{GS} = 0V, T_J = 25\text{ C}$
				-60	μA	$V_{DS} = -50V, V_{GS} = 0V, T_J = 125\text{ C}$
Gate-Body Leakage	I_{GSS}			10	μA	$V_{GS} = 20V, V_{DS} = 0V$
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	$V_{DD} = -30V, I_D = -0.27A,$ $R_{GEN} = 50\ \Omega, V_{GS} = -10V$
Turn-Off Delay Time	$t_{D(OFF)}$		18		ns	



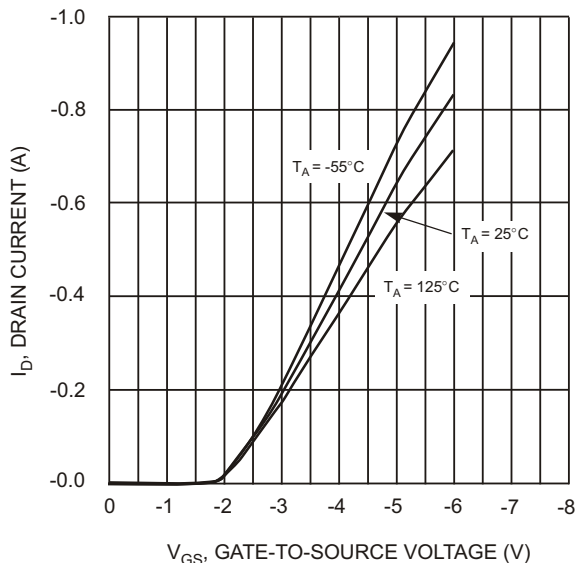
T_A , AMBIENT TEMPERATURE ($^{\circ}C$)

Fig. 1, Max Power Dissipation vs Ambient Temperature



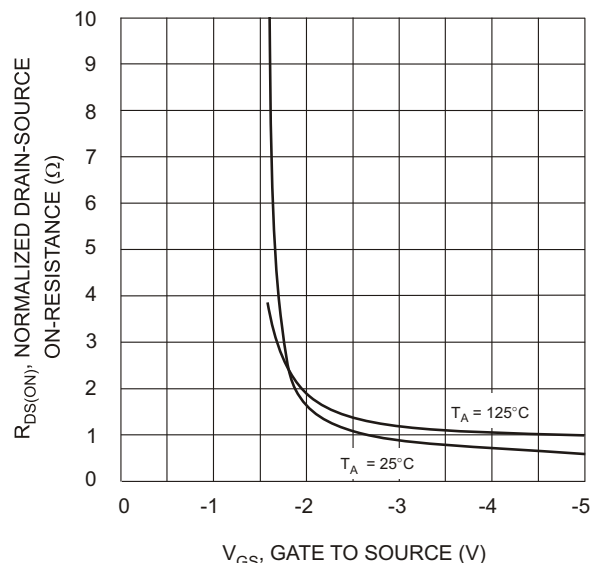
V_{DS} , DRAIN SOURCE (V)

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



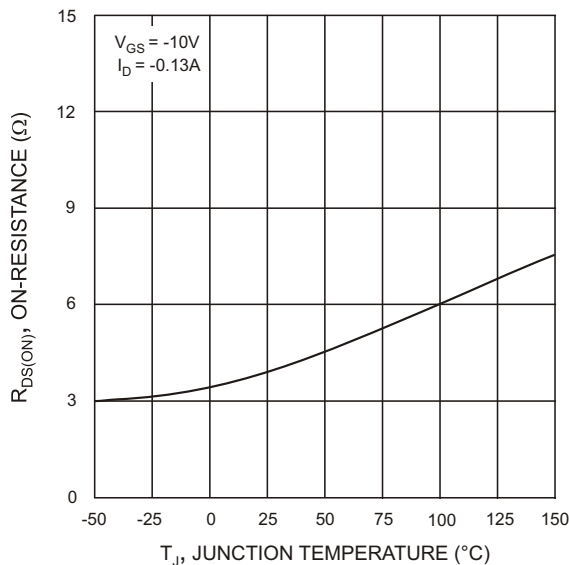
V_{GS} , GATE-TO-SOURCE VOLTAGE (V)

Fig. 3, Drain Current vs. Gate Source Voltage



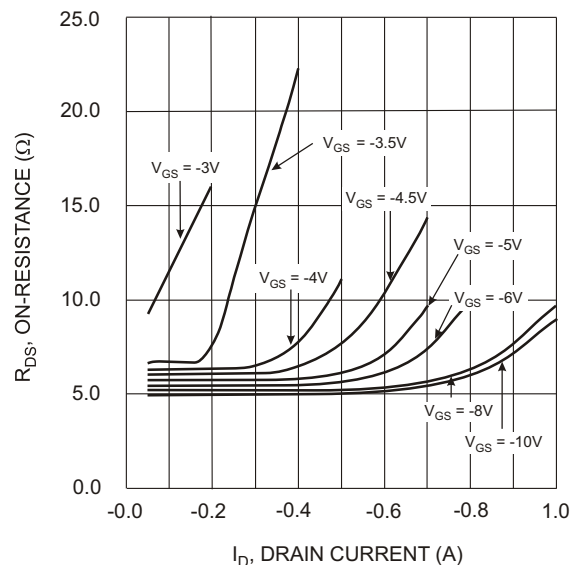
V_{GS} , GATE TO SOURCE (V)

Fig. 4, On-Resistance vs. Gate Source Voltage



T_J , JUNCTION TEMPERATURE ($^{\circ}C$)

Fig. 5, On-Resistance vs. Junction Temperature

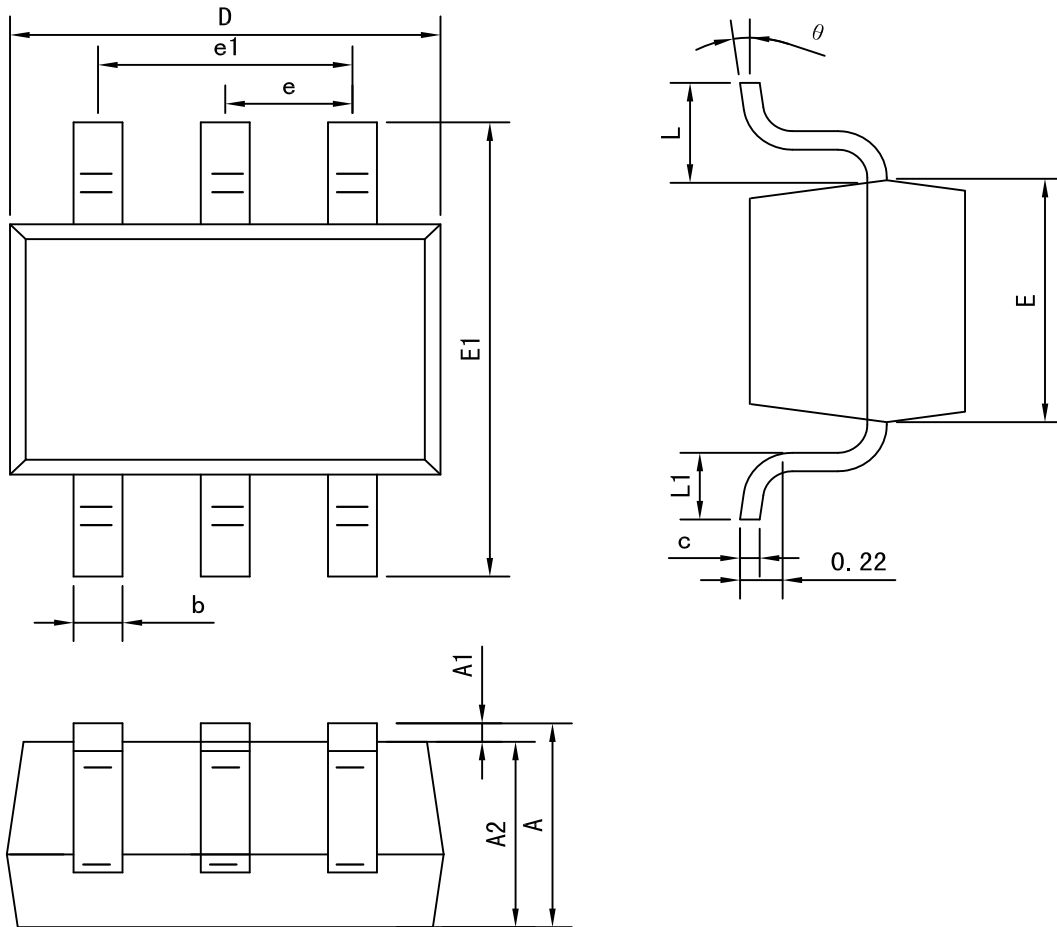


I_D , DRAIN CURRENT (A)

Fig. 6, On-Resistance vs. Drain Current



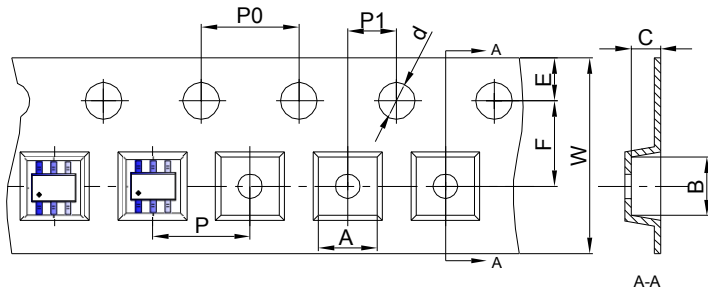
SOT-363 Package outline dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°



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

