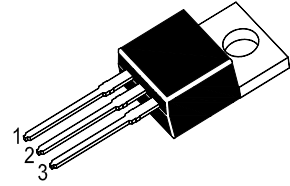


# 2SK1118

## N-Channel Enhancement Mode Field Effect Transistor

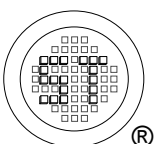


1.Base 2.Collector 3.Emitter

TO-220 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	600	V
Collector Emitter Voltage	$V_{CEO}$	600	V
Emitter Base Voltage	$V_{EBO}$	$\pm 30$	V
Collector Current	$I_C$	6	A
Collector Current (Pulse)	$I_{CP}$	24	A
Power Dissipation ( $T_c = 25^\circ\text{C}$ )	$P_{tot}$	45	W
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	62.5	$^\circ\text{C/W}$
Thermal Resistance Junction to Case	$R_{\theta JC}$	2.77	$^\circ\text{C/W}$
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$



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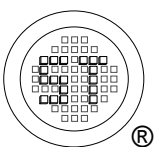
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## Electrical Characteristics at T<sub>a</sub> = 25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at I <sub>D</sub> = 10 mA	V <sub>(BR)DSS</sub>	600	-	-	V
Drain-Source Leakage Current at V <sub>DS</sub> = 600 V	I <sub>DSS</sub>	-	-	300	μA
Gate-Source Leakage Current at V <sub>GS</sub> = ± 25 V	I <sub>GSS</sub>	-	-	± 100	nA
Gate-Source Threshold Voltage at V <sub>DS</sub> = 10 V, I <sub>D</sub> = 1 mA	V <sub>GS(th)</sub>	1.5	-	3.5	V
Drain-Source On-State Resistance at V <sub>GS</sub> = 10 V, I <sub>D</sub> = 3 A	R <sub>DS(on)</sub>	-	-	1.25	Ω
Forward Transconductance at V <sub>DS</sub> = 10 V, I <sub>D</sub> = 3 A	g <sub>FS</sub>	3	-	-	S
Input Capacitance at V <sub>DS</sub> = 10 V, f = 1 MHz	C <sub>iss</sub>	-	-	2000	pF
Output Capacitance at V <sub>DS</sub> = 10 V, f = 1 MHz	C <sub>oss</sub>	-	-	380	pF
Reverse Transfer Capacitance at V <sub>DS</sub> = 10 V, f = 1 MHz	C <sub>rss</sub>	-	-	120	pF
Turn-On Delay Time at V <sub>DD</sub> = 300 V, V <sub>GS</sub> = 10 V, I <sub>D</sub> = 3 A, R <sub>L</sub> = 100 Ω	t <sub>d(on)</sub>	-	-	80	ns
Turn-On Rise Time at V <sub>DD</sub> = 300 V, V <sub>GS</sub> = 10 V, I <sub>D</sub> = 3 A, R <sub>L</sub> = 100 Ω	t <sub>r</sub>	-	-	50	ns
Turn-Off Delay Time at V <sub>DD</sub> = 300 V, V <sub>GS</sub> = 10 V, I <sub>D</sub> = 3 A, R <sub>L</sub> = 100 Ω	t <sub>d(off)</sub>	-	-	170	ns
Turn-Off Fall Time at V <sub>DD</sub> = 300 V, V <sub>GS</sub> = 10 V, I <sub>D</sub> = 3 A, R <sub>L</sub> = 100 Ω	t <sub>f</sub>	-	-	40	ns



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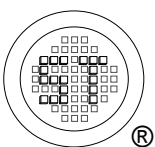
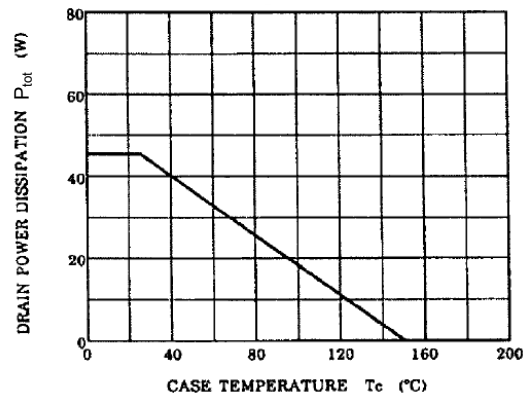
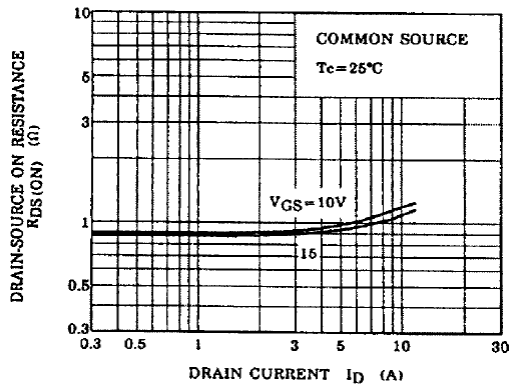
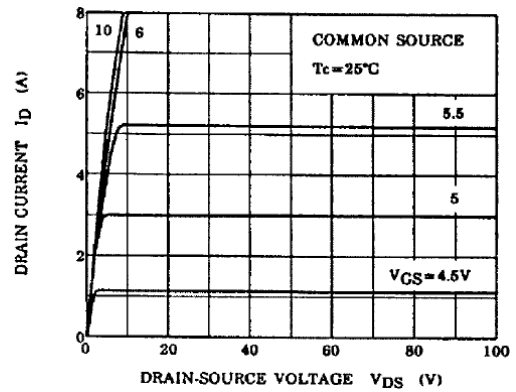
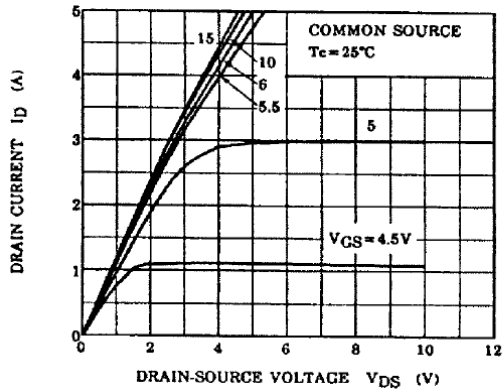
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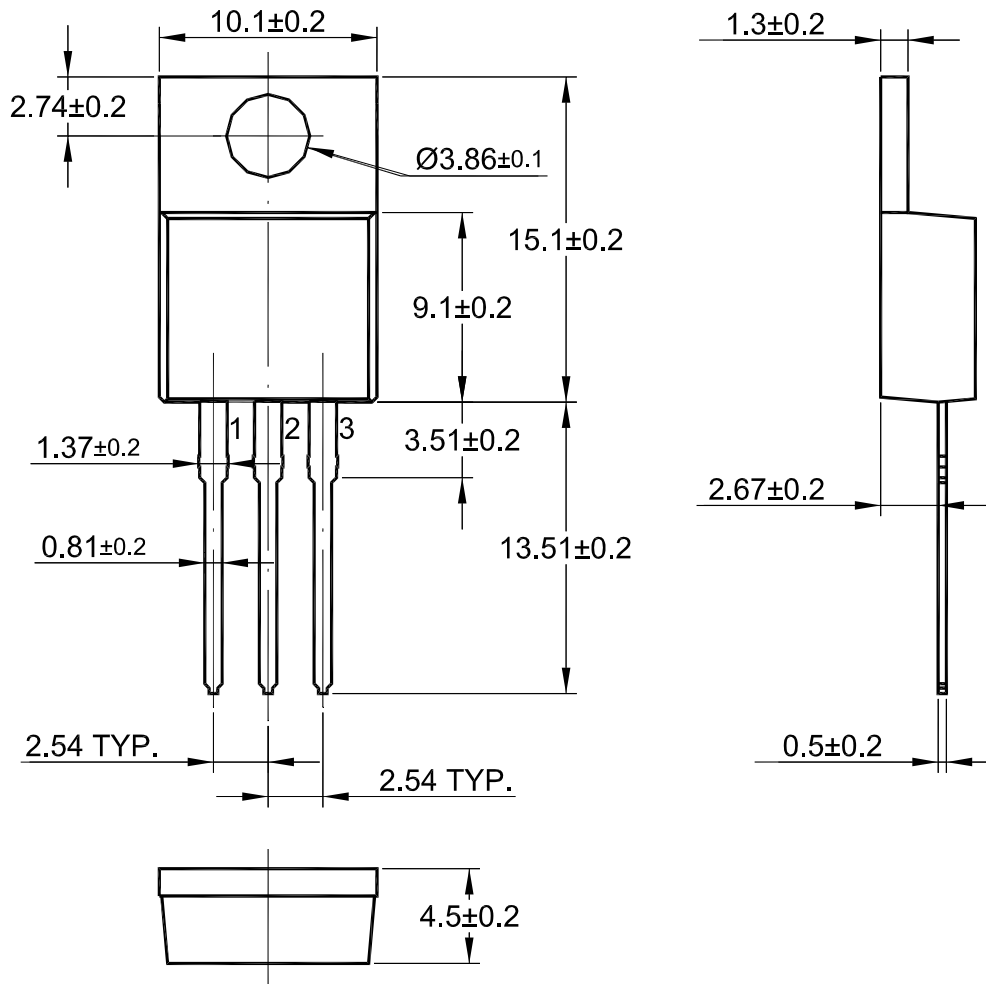
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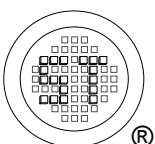
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# 2SK1118

## TO-220 Package Outline



Dimensions in mm



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